


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☒**APPLICATION FOR PERMIT TO DRILL**

<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>1. WELL NAME and NUMBER</b> Buck Camp Unit 11-22-44-30		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>3. FIELD OR WILDCAT</b> WILDCAT		
<b>6. NAME OF OPERATOR</b> Enduring Resources, LLC				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> BUCK CAMP		
<b>8. ADDRESS OF OPERATOR</b> 475 17th Street, Suite 1500, Denver, CO, 80202				<b>7. OPERATOR PHONE</b> 303 350-5114		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU-73907		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>9. OPERATOR E-MAIL</b> aarlian@enduringresources.com		
<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>				<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		
<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>				<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		
<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>				<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>				<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	565 FSL 534 FEL	SESE	30	11.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	565 FSL 534 FEL	SESE	30	11.0 S	22.0 E	S
<b>At Total Depth</b>	565 FSL 534 FEL	SESE	30	11.0 S	22.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 534		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 800		
<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 1500		<b>26. PROPOSED DEPTH</b> MD: 8450 TVD: 8450				
<b>27. ELEVATION - GROUND LEVEL</b> 534		<b>28. BOND NUMBER</b> UTB000173		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 49-2296		

**ATTACHMENTS****VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
<b>NAME</b> Alvin Arlian	<b>TITLE</b> Landman-Regulatory
<b>SIGNATURE</b>	<b>PHONE</b> 303 350-5114
<b>API NUMBER ASSIGNED</b> 43047510190000	<b>DATE</b> 03/17/2010
<b>APPROVAL</b>	<b>EMAIL</b> aarlian@enduringresources.com
 Permit Manager	

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Cond	20	14	0	40		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	40	36.0			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2000		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	2000	24.0			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	8450		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	8450	11.6			



**Enduring Resources, LLC**

**Buck Camp Unit 11-22-44-30**

SESE Sec. 30, T11S-R22E

Uintah County, Utah

**Federal Lease: UTU-73907**

**ONSHORE ORDER 1 - DRILLING PLAN**

**1. Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	1225'
Wasatch	3675'
Mesaverde	5947'

**2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.) TVD
	KB-Uinta Elevation: 5984' est.	
Oil / Gas	Green River	1225'
Oil /Gas	Wasatch	3675'
Oil /Gas	Mesaverde	5947'
	TD	8460'

An 11" hole surface hole will be drilled with air, air/mist, foam or mud depending on hole conditions to approximately 2016 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set and cemented to surface. Surface casing will be pre-set before drilling rig is moved on location. ProPetro Services Incorporated, or if not available, another Surface Hole Driller (collectively "Surface Hole Driller") will drill the surface hole. A 300 or 400 bbl tank of fresh water will be on location prior to commencement of operations to use as a kill fluid. The anchored blooie line shall be at least 6" in diameter and extend straight from the wellhead to the reserve/blooie pit. Surface Hole Driller's equipment includes a 1250 CFM compressor on the drilling rig along with a 1070 to 1170 CFM stand alone compressor. Surface Hole Driller's equipment shall be setup on the front side of the location with the rig between the driller and the reserve/blooie pit. The stand alone compressor will be adjacent to the rig on the same side as the driller. Surface Hole Driller's equipment includes spark arrestors on engines, a diverter head, a mister close to the end of the

blooie line for dust suppression, a continuously lit pilot light, a fluid pump to circulate kill fluids as necessary, a diverter on the end of the blooie line, a float valve in the drill string and kill switches.

**3. Pressure Control Equipment: (3000 psi schematic attached)**

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

**Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

4. **Proposed Casing & Cementing Program:**

A. **Casing Program: All New**

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 8450' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe. Surface casing will be pre-set before the drilling rig is moved on location.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

B. **Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
7450' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.57 (d)	7780/2.09 (e)	223/2.87 (f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

**PROPOSED CEMENTING PROGRAM****Surface Casing (if well will circulate)**-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub> + 0.25 pps celloflake. Volume as required

**Surface Casing (if well will not circulate)** - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

**Production Casing and Liner** - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	1559	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	137	25	11.0	3.3
4-1/2"	Tail	5175	50/50 POZ Class G + 2% gel + 1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	8945	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole

size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

**5. Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' – 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-8450' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations. For the surface casing water and wellbore cuttings will be used as necessary for a weighting material. For the rest of the well wellbore cuttings will be used as a weighting material. Barite will be used as needed for a weighting material in the lower portions of the well. The mud properties will be checked at least daily by the drilling rig personnel and/or by the mud company representative. The mud company representative will leave a written report at the rig when the mud is checked. The mud weight will be measured with a mud balance.

**6. Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

**7. Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 4,394 psi (calculated at 0.52 psi/foot of hole) and maximum anticipated surface pressure equals approximately 2,535 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

**8. Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

**9. Variances:**

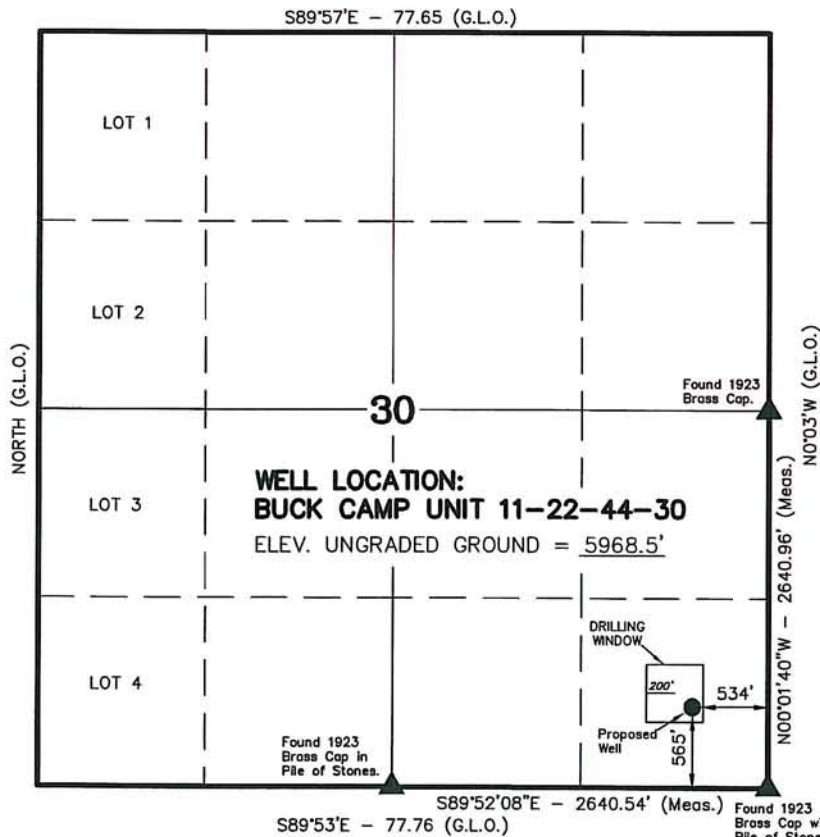
None anticipated

**10. Other:**

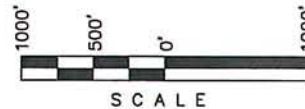
A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

A measurement while drilling (MWD) system will be used to track and control the directional path of the wellbore.



**T11S, R22E, S.L.B.&M.****ENDURING RESOURCES**

WELL LOCATION, BUCK CAMP UNIT  
11-22-44-30, LOCATED AS SHOWN IN  
THE SE 1/4 SE 1/4 OF SECTION 30,  
T11S, R22E, S.L.B.&M. UINTAH COUNTY,  
UTAH.

**NOTES:**

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. Bearings are based on Global Positioning Satellite observations.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 362251  
STATE OF UTAH

▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS TRI-STA JEK 18 1966  
LOCATED IN THE NE 1/4 OF SECTION 29, T12S,  
R23E, S.L.B.&M. THE ELEVATION OF THIS  
TRI-STA IS SHOWN ON THE COOPER CANYON  
7.5 MIN. QUADRANGLE AS BEING 6088'

**BUCK CAMP UNIT 11-22-44-30**  
(Proposed Well Head)  
NAD 83 Autonomous  
LATITUDE = 39° 49' 33.40"  
LONGITUDE = 109° 29' 24.77"

**TIMBERLINE**

(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**

38 WEST 100 NORTH - VERNAL, UTAH 84078

DATE SURVEYED: 10-29-08	SURVEYED BY: D.J.S.	SHEET <b>2</b> OF 10
DATE DRAWN: 10-31-08	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	



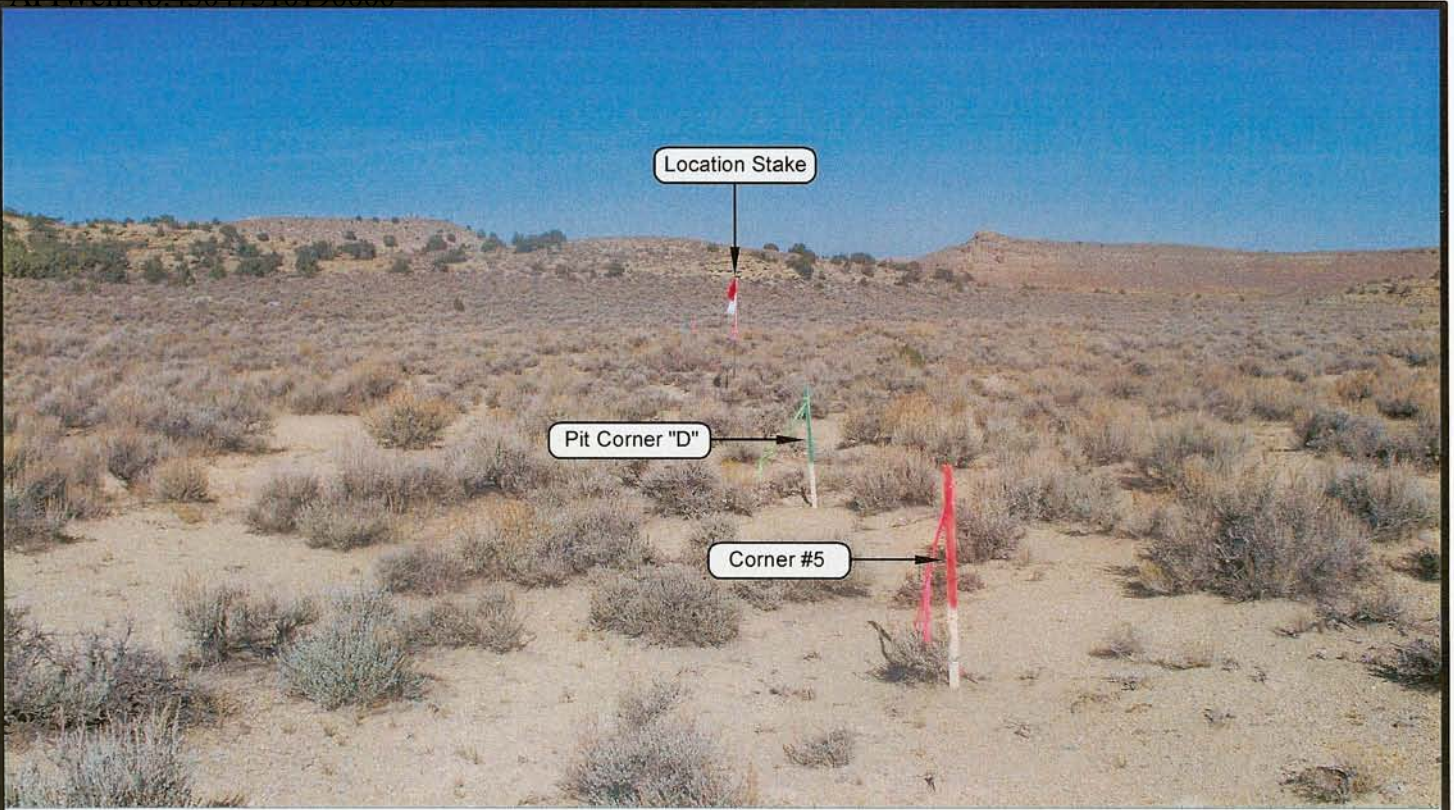


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY

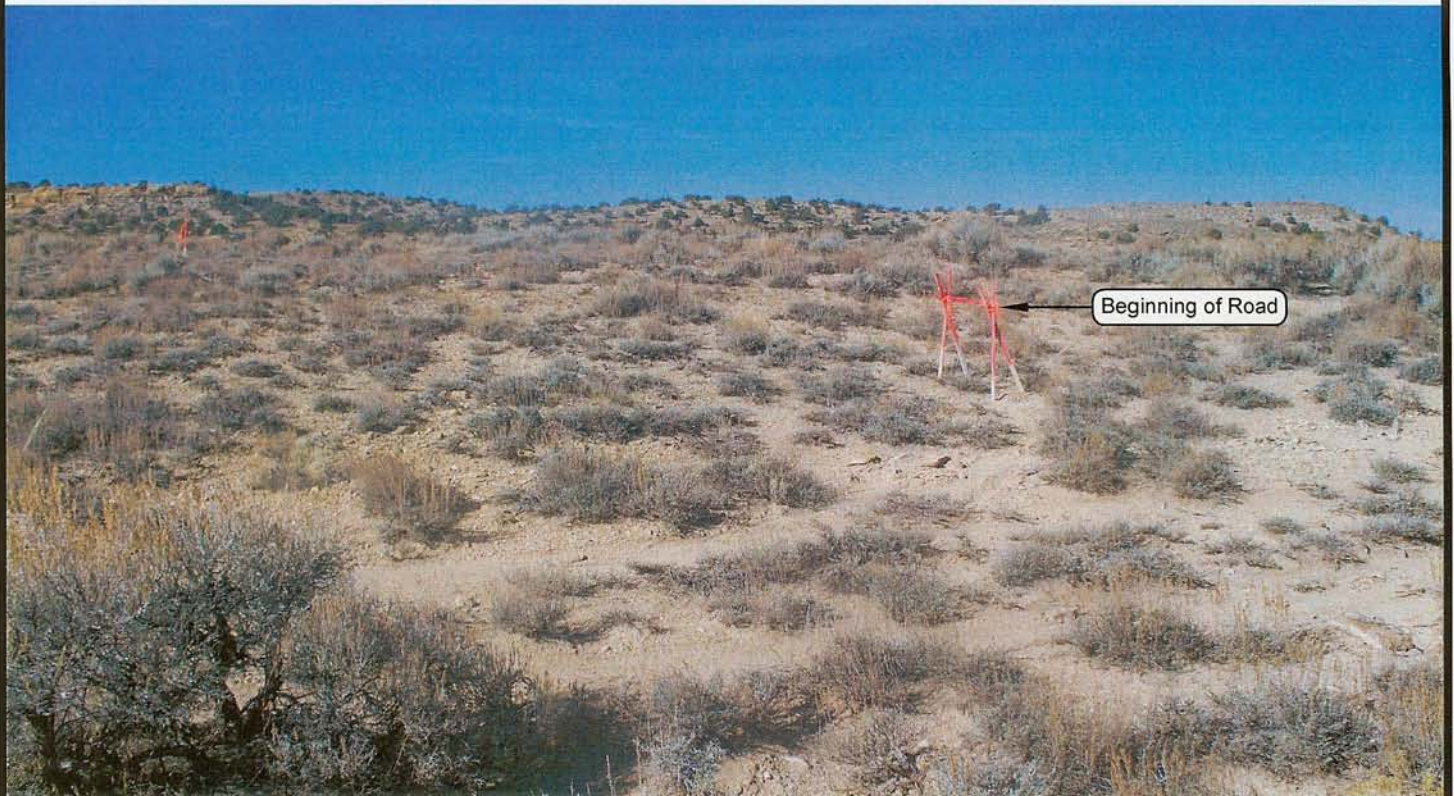


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

## ENDURING RESOURCES

**Buck Camp Unit 11-22-44-30  
SECTION 30, T11S, R22E, S.L.B.&M.**

### LOCATION PHOTOS

TAKEN BY: D.J.S.

DRAWN BY: M.W.W.

DATE TAKEN: 10-29-08

DATE DRAWN: 11-03-08

REVISED:

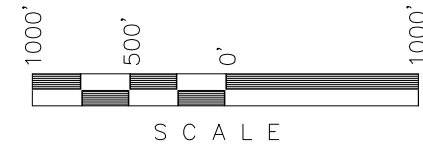
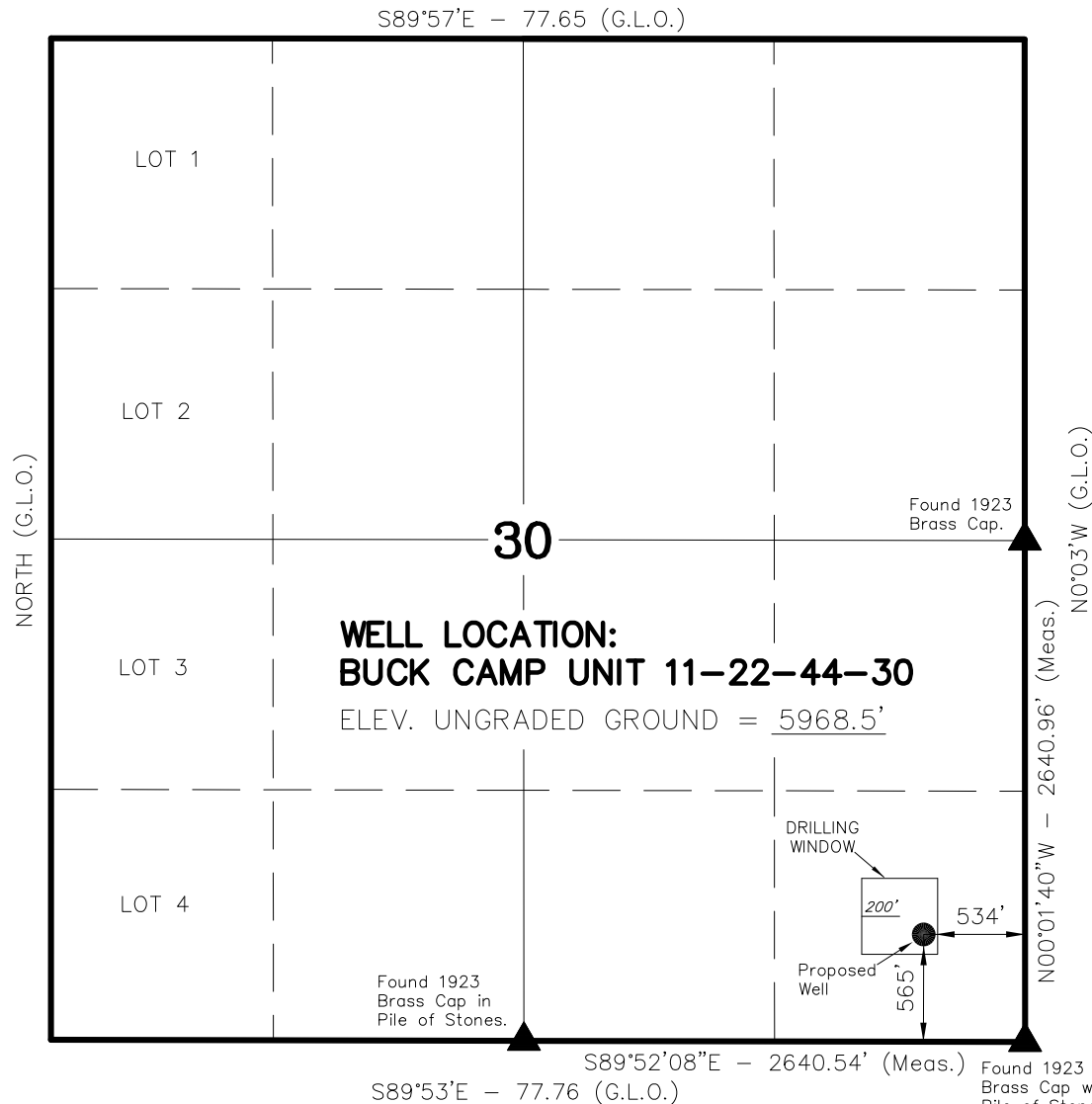
**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078

**SHEET  
1  
OF 10**



## ENDURING RESOURCES

WELL LOCATION, BUCK CAMP UNIT  
11-22-44-30, LOCATED AS SHOWN IN  
THE SE 1/4 SE 1/4 OF SECTION 30,  
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UTAH.



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REGISTERED LAND SURVEY  
REGISTRATION No. 362251  
STATE OF UTAH

▲ = SECTION CORNERS LOCATED  
BASIS OF ELEVATION IS TRI-STA JEK 18 1966  
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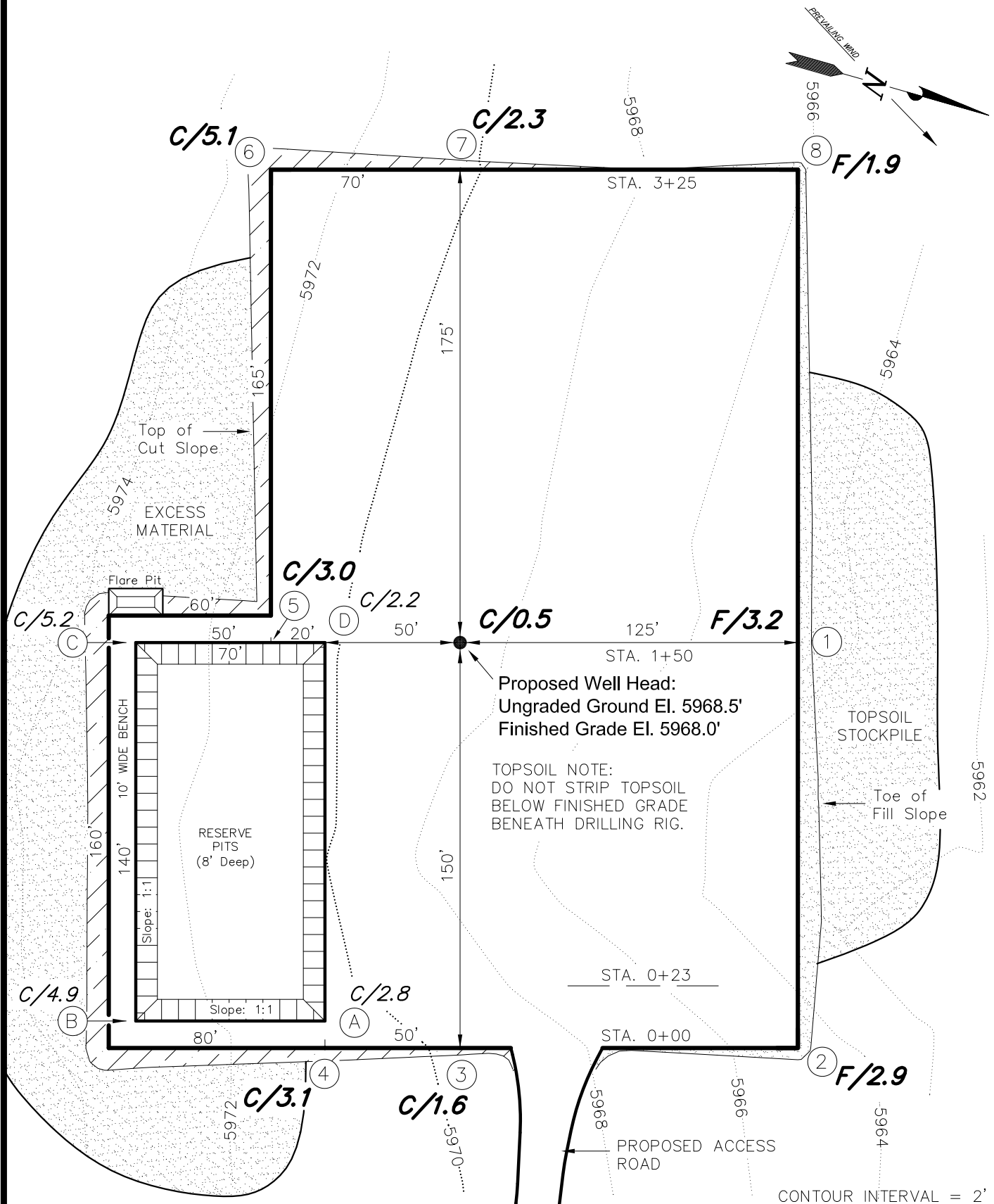
BUCK CAMP UNIT 11-22-44-30  
(Proposed Well Head)  
NAD 83 Autonomous  
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ENGINEERING & LAND SURVEYING, INC.  
38 WEST 100 NORTH - VERNAL, UTAH 84078

DATE SURVEYED: 10-29-08	SURVEYED BY: D.J.S.	<b>SHEET</b> <b>2</b> <b>OF 10</b>
DATE DRAWN: 10-31-08	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	

# ENDURING RESOURCES

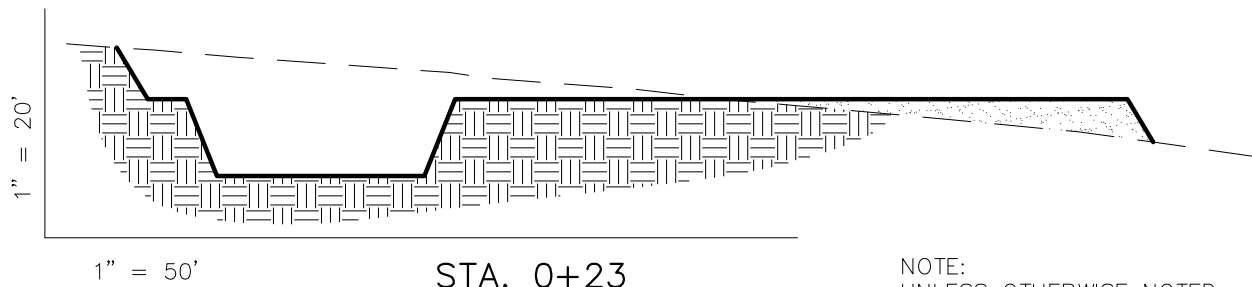
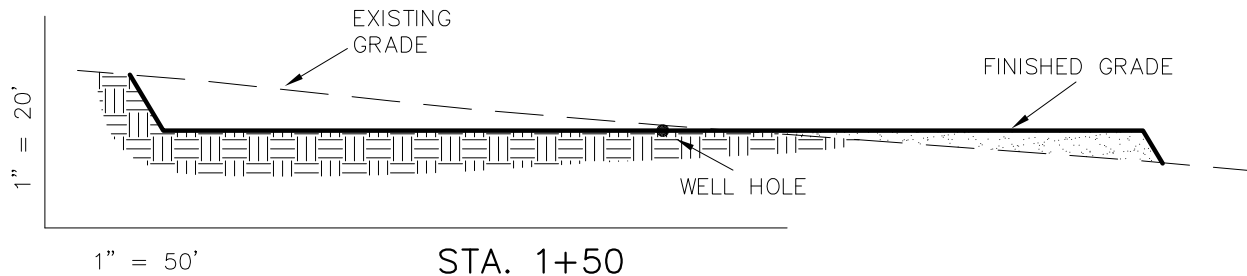
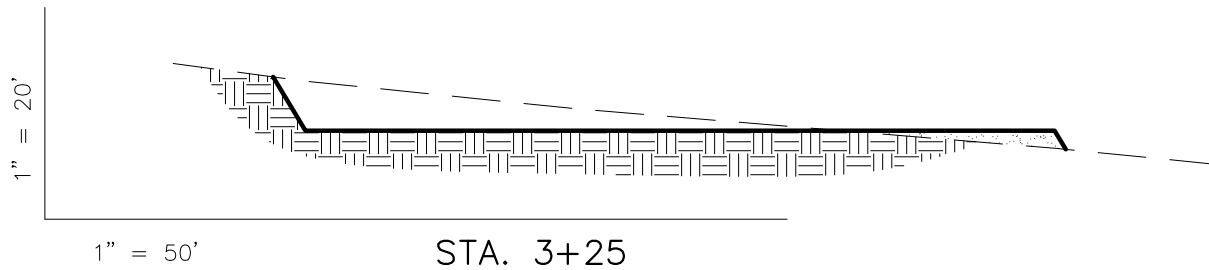
## CUT SHEET - BUCK CAMP UNIT 11-22-44-30



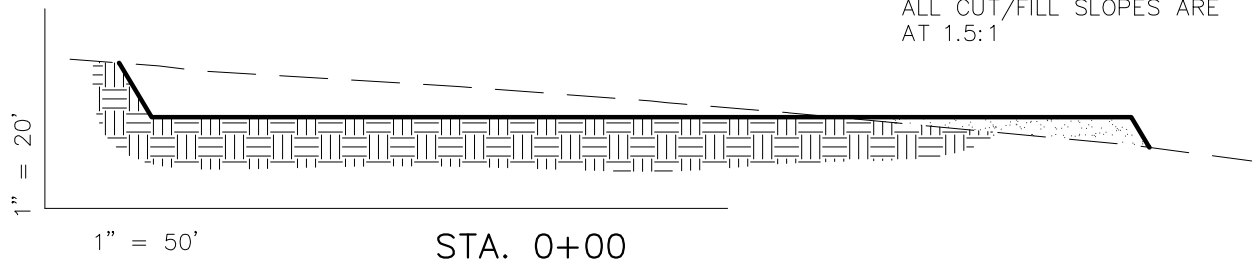
Section 30, T11S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 565' FSL & 534' FEL
Date Surveyed: 10-29-08	Date Drawn: 11-03-08	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: D.J.S.	Drawn By: M.W.W.	Scale: 1" = 50'	Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078
			<b>SHEET 3 OF 10</b>

# ENDURING RESOURCES

## CROSS SECTIONS – BUCK CAMP UNIT 11-22-44-30



NOTE:  
UNLESS OTHERWISE NOTED  
ALL CUT/FILL SLOPES ARE  
AT 1.5:1



### REFERENCE POINTS

175' NORTHERLY = 5963.0'  
225' NORTHERLY = 5960.5'  
200' EASTERLY = 5970.0'  
250' EASTERLY = 5970.2'

### ESTIMATED EARTHWORK QUANTITIES (No shrink or swell adjustments have been used) (Expressed in Cubic Yards)

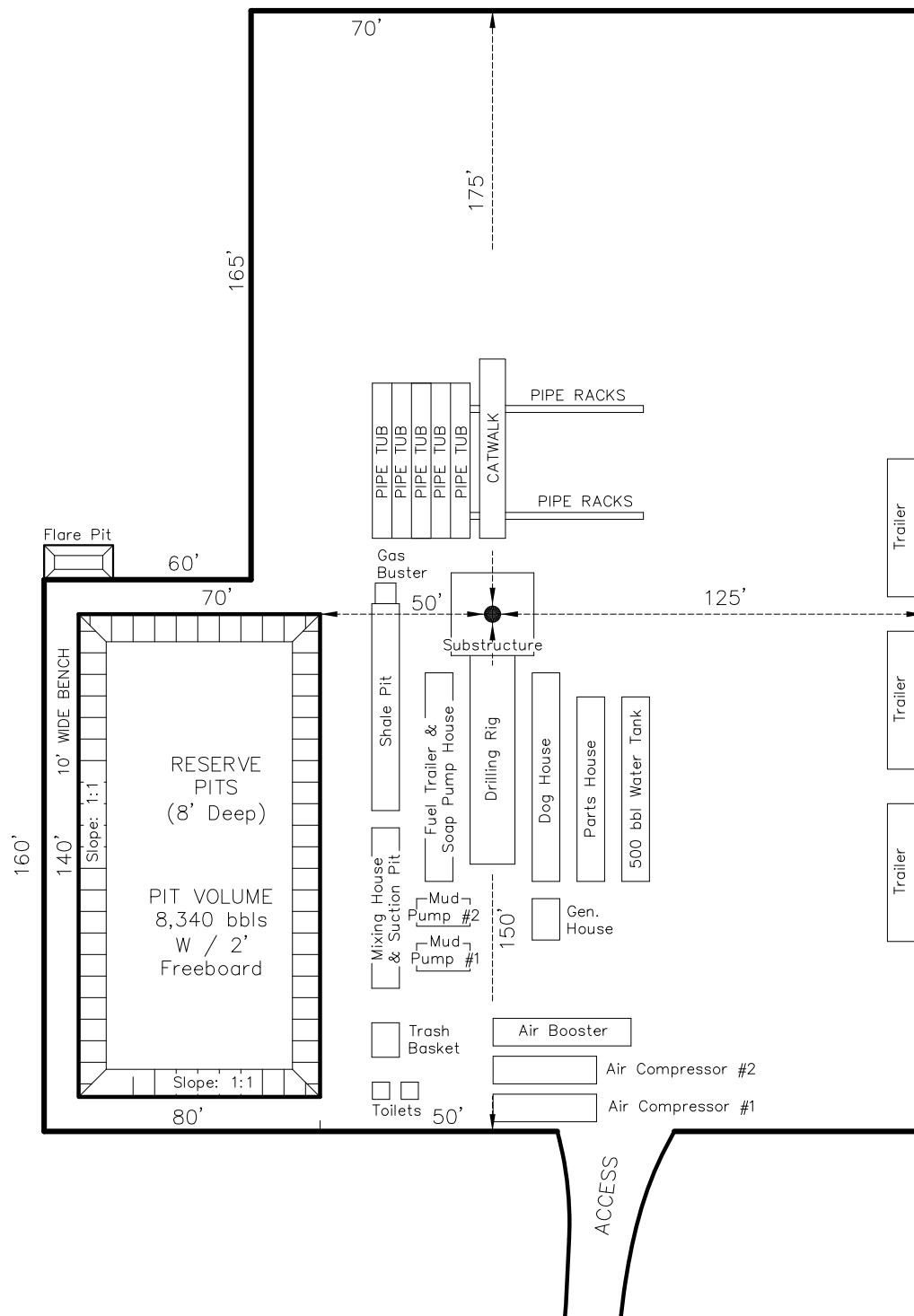
CUT	Excess Material	= 3,770
6" Topsoil Stripping = 1,350	Topsoil & Pit Backfill = 3,770	
Remaining Location = 5,550	(Full Pit Volume)	
<b>TOTAL CUT = 6,900</b>	Excess Unbalance	= 0
<b>FILL = 3,130</b>	(After Rehabilitation)	

Section 30, T11S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 565' FSL & 534' FEL
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Surveyed By: D.J.S.	Drawn By: M.W.W.	Scale: 1" = 50'	

**SHEET**  
**4**  
**OF 10**

# ENDURING RESOURCES

## TYPICAL RIG LAYOUT – BUCK CAMP UNIT 11-22-44-30

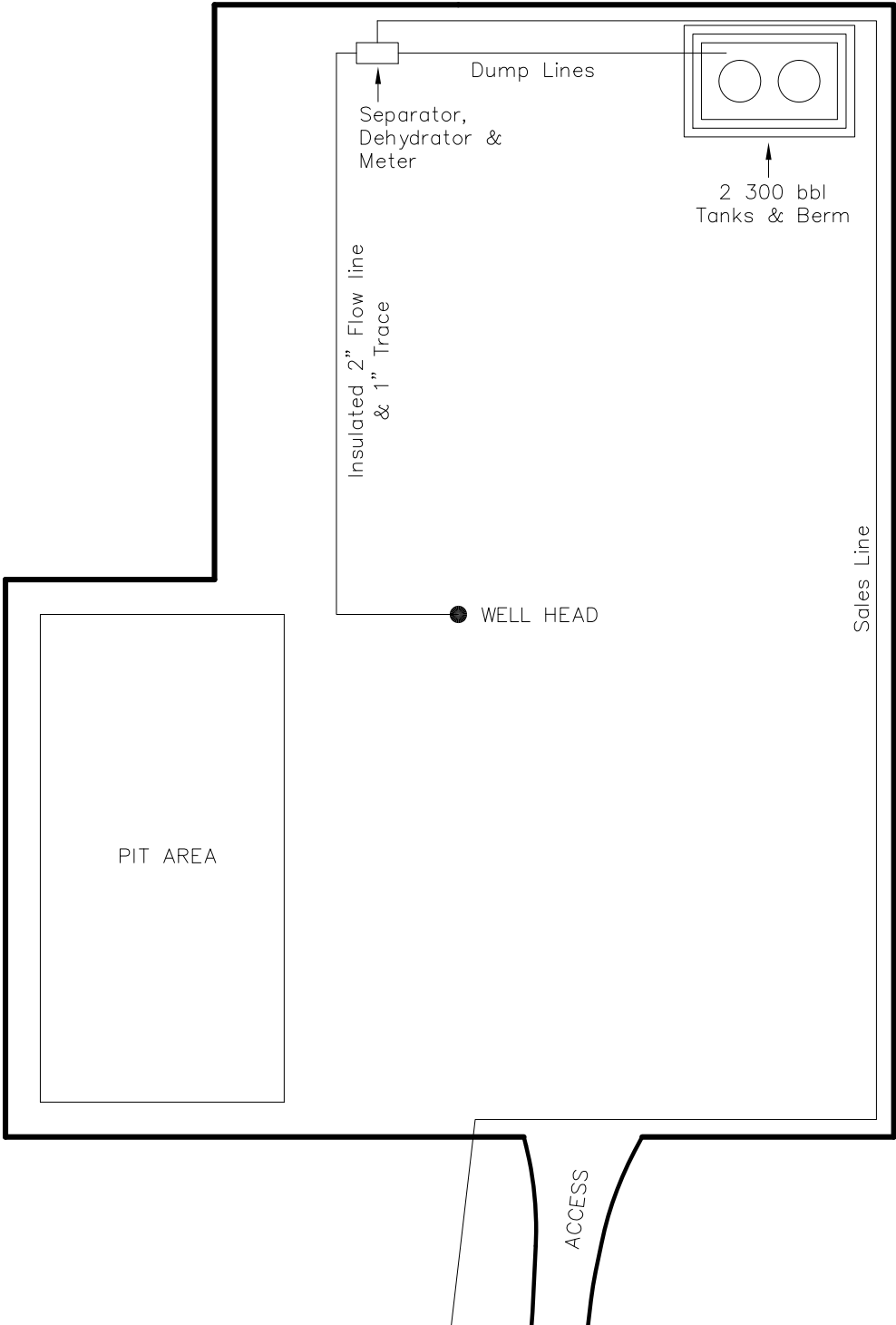


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Surveyed By: D.J.S.	Drawn By: M.W.W.	Scale: 1" = 50'			

ENDURING RESOURCES

TYPICAL PRODUCTION LAYOUT – BUCK CAMP UNIT

11–22–44–30



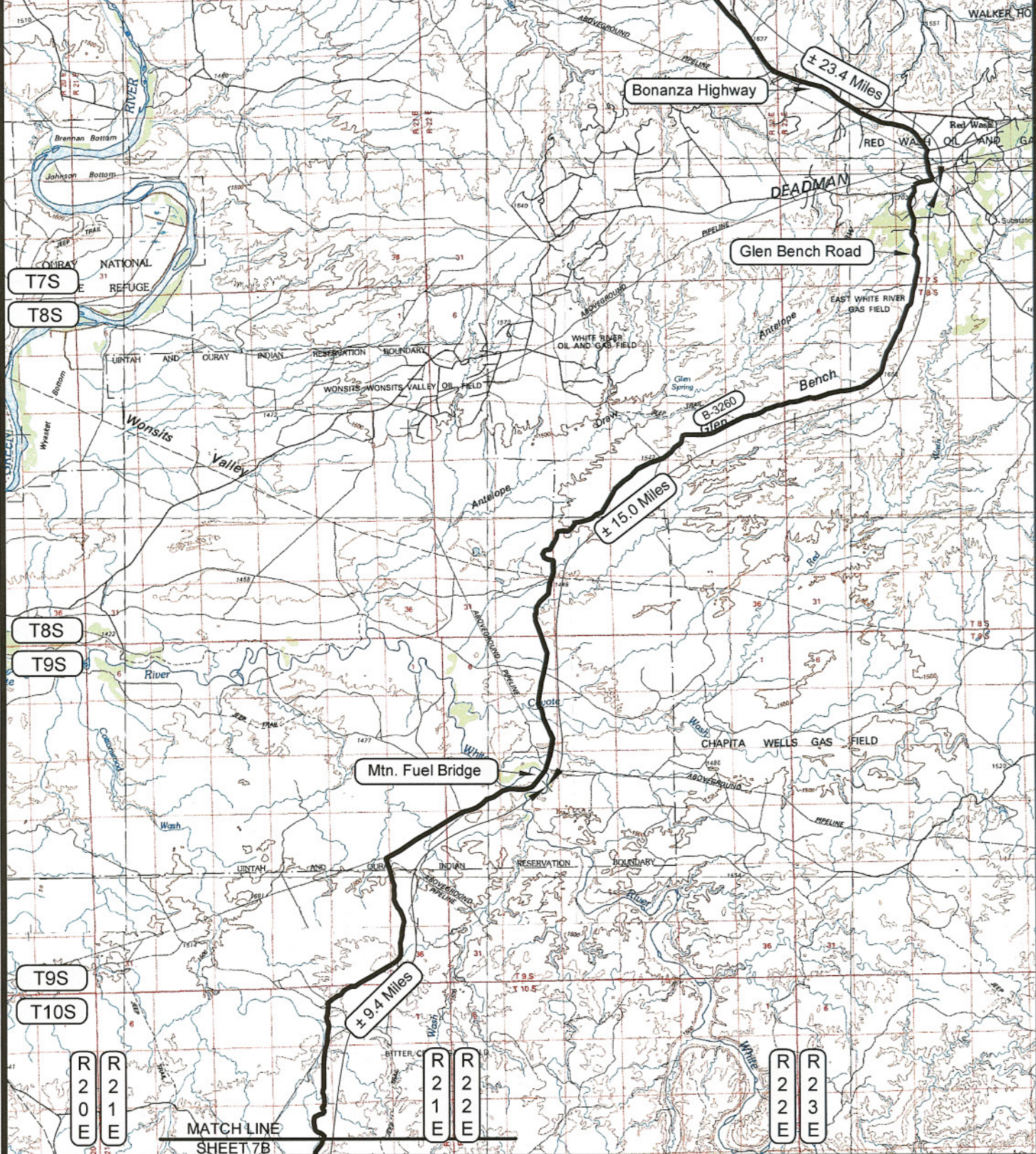
Section 30, T11S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 565' FSL & 534' FEL
Date Surveyed: 10–29–08	Date Drawn: 11–03–08	Date Last Revision:	<div>Timberline</div> <div>Engineering &amp; Land Surveying, Inc.</div> <div>(435) 789–1365</div> <div>38 WEST 100 NORTH VERNAL, UTAH 84078</div>
Surveyed By: D.J.S.	Drawn By: M.W.W.	Scale: 1" = 50'	

SHEET

6

OF 10





LEGEND

- PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = OTHER WELLS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)

(B-5460) = COUNTY ROAD CLASS & NUMBER

TOPOGRAPHIC MAP "A"

DATE SURVEYED: 10-29-08

DATE DRAWN: 11-03-08

SCALE: 1:150,000

DRAWN BY: M.W.W.

REVISED: 12-23-08

ENDURING RESOURCES

**Buck Camp Unit 11-22-44-30**  
**SECTION 30, T11S, R22E, S.L.B.&M.**

*Timberline*

Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078

(435) 789-1365

SHEET

7a

OF 10



MATCH LINE

Bitter Creek Road

± 4.6 Miles

B-4120

East Bench Road

± 9.2 Miles

B-4130

Proposed Well Location:  
Buck Camp Unit 11-22-44-30

See Topo "B"

## LEGEND

PROPOSED ACCESS ROAD

--- = SUBJECT WELL

--- = OTHER WELLS

— = EXISTING ROAD

— = EXISTING ROAD (TO BE IMPROVED)

B-5460 = COUNTY ROAD CLASS &amp; NUMBER

## TOPOGRAPHIC MAP "A"

DATE SURVEYED: 10-29-08

DATE DRAWN: 11-03-08

SCALE: 1:150,000

DRAWN BY: M.W.W.

REVISED: 12-23-08

## ENDURING RESOURCES

**Buck Camp Unit 11-22-44-30**  
**SECTION 30, T11S, R22E, S.L.B.&M.**

Timberline

(435) 789-1365

Engineering &amp; Land Surveying, Inc.

38 WEST 100 NORTH

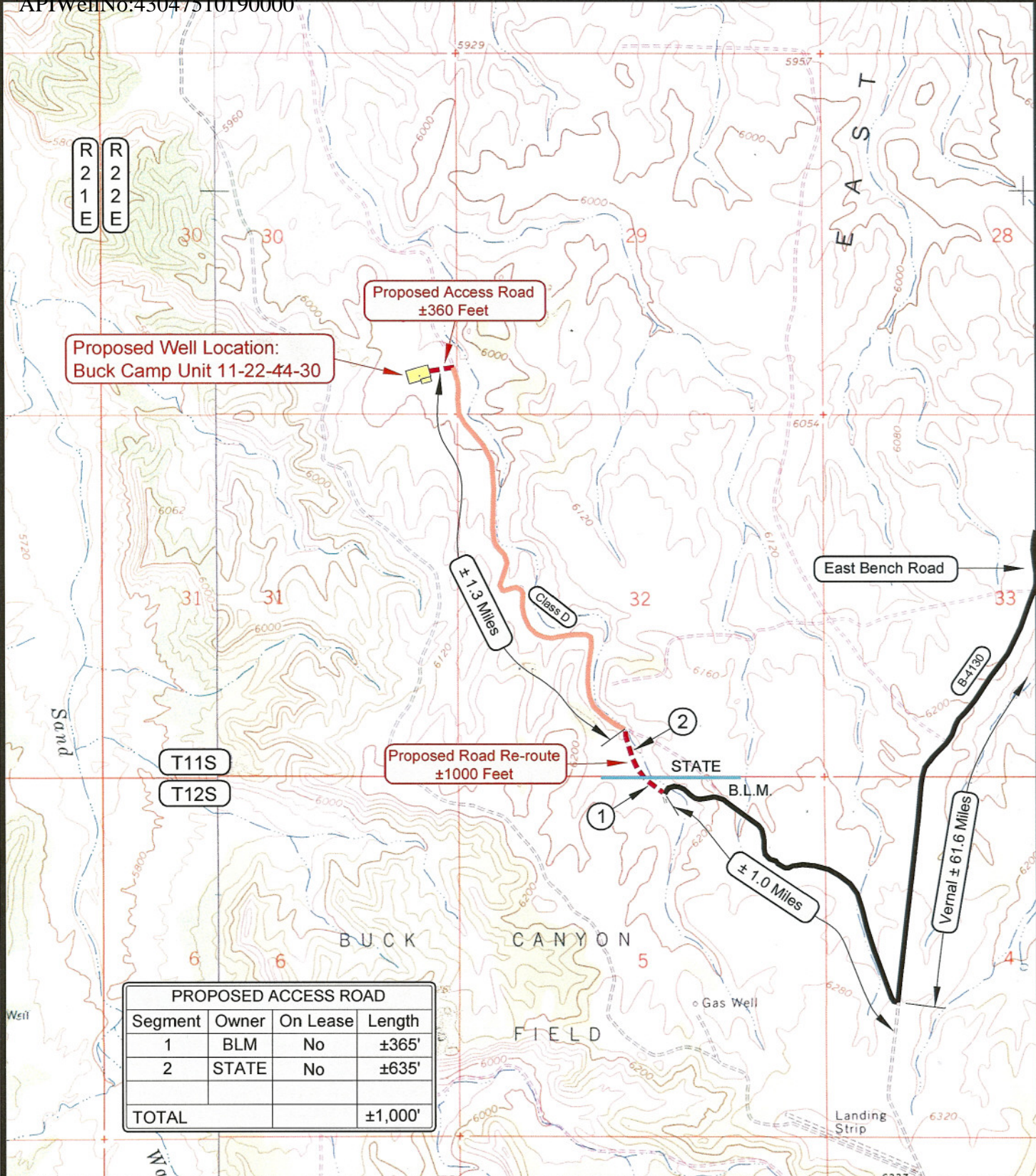
VERNAL, UTAH 84078

SHEET

7b

OF 10





#### LEGEND

- PROPOSED ACCESS ROAD  
 - - - - - = SUBJECT WELL  
 - - - - - = OTHER WELLS  
 - - - - - = EXISTING ROAD  
 - - - - - = EXISTING ROAD (TO BE IMPROVED)  
 B-5460 = COUNTY ROAD CLASS & NUMBER  
 - - - - - = LEASE LINE AND / OR PROPERTY LINE

#### TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

DATE SURVEYED: 10-29-08

DATE DRAWN: 11-03-08

REVISED: 12-23-08

#### ENDURING RESOURCES

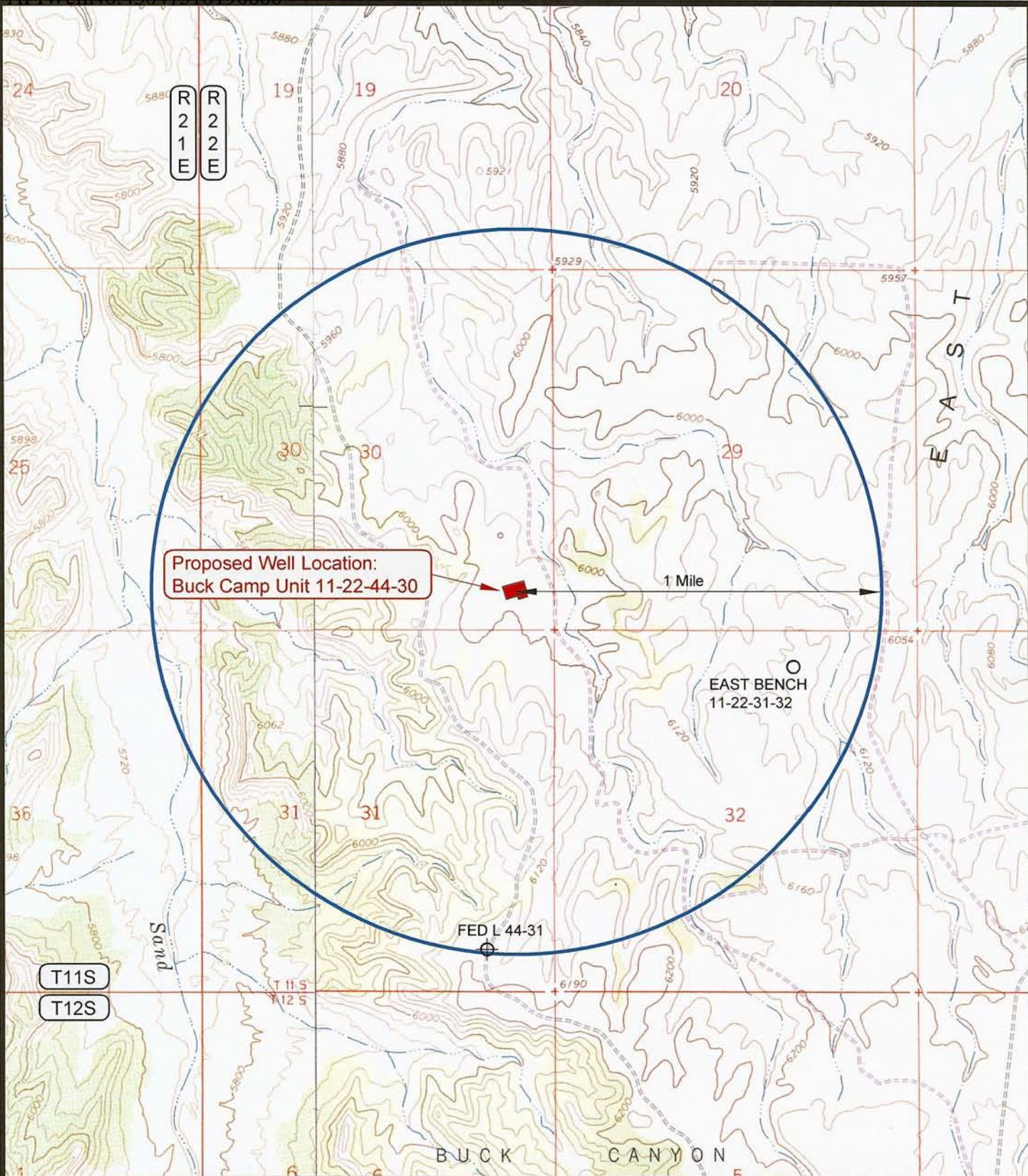
**Buck Camp Unit 11-22-44-30**  
**SECTION 30, T11S, R22E, S.L.B.&M.**

**Timberline**

(435) 789-1365  
 Engineering & Land Surveying, Inc.  
 38 WEST 100 NORTH VERNAL, UTAH 84078

**SHEET**  
**8**  
**OF 10**





### LEGEND

- |                    |                                |
|--------------------|--------------------------------|
| ⊘ = DISPOSAL WELL  | ⊘ = WATER WELL                 |
| ● = PRODUCING WELL | ● = ABANDONED WELL             |
| ● = SHUT IN WELL   | ● = TEMPORARILY ABANDONED WELL |
| ○ = PROPOSED WELL  | ⊕ = ABANDONED LOCATION         |

### TOPOGRAPHIC MAP "C"

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

DATE SURVEYED: 10-29-08

DATE DRAWN: 11-03-08

REVISED:

### ENDURING RESOURCES

**Buck Camp Unit 11-22-44-30**  
**SECTION 30, T11S, R22E, S.L.B.&M.**

*Timberline*

Engineering & Land Surveying, Inc.  
 38 WEST 100 NORTH VERNAL, UTAH 84078

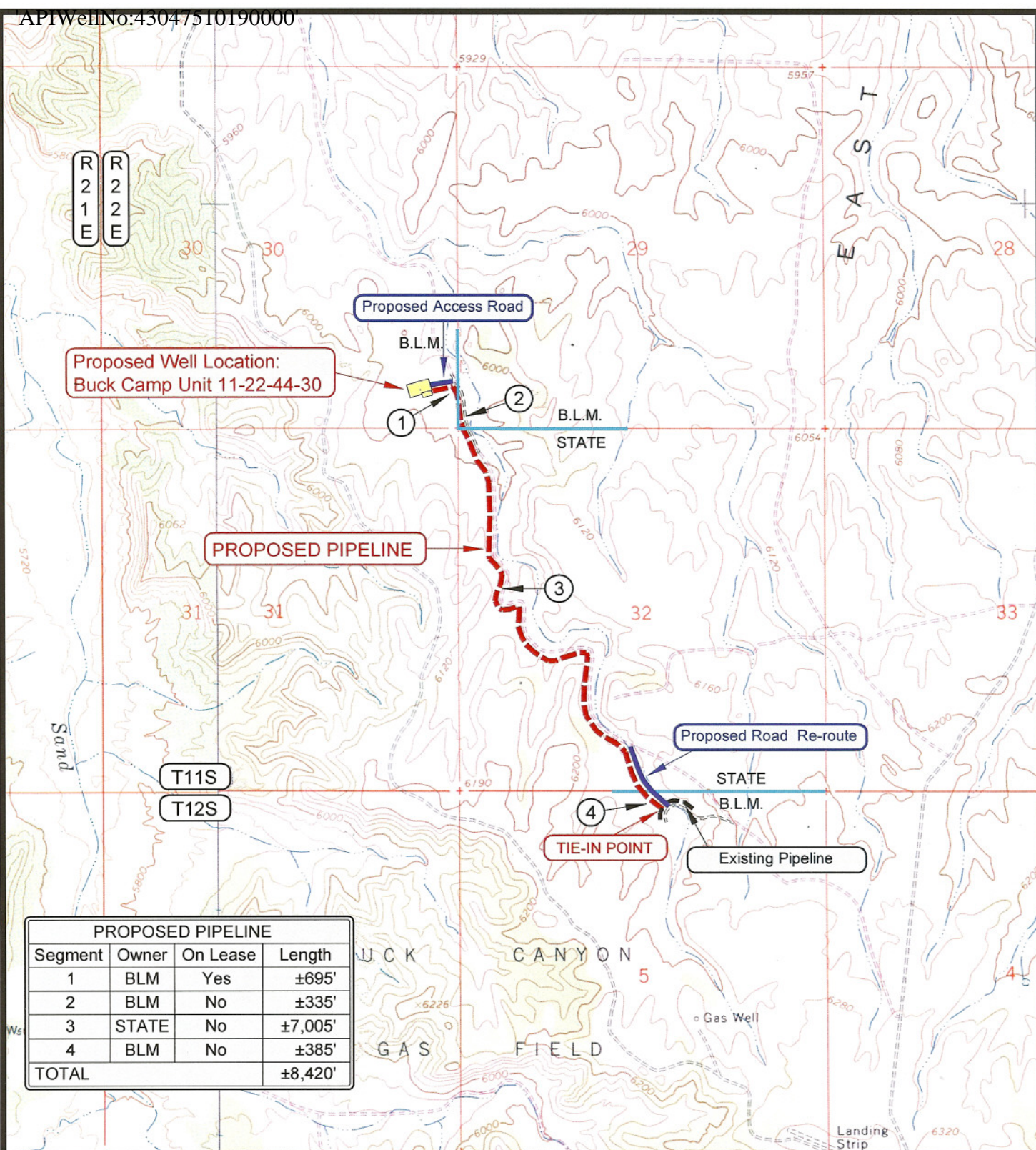
(435) 789-1365

SHEET

9

OF 10





**APPROXIMATE PIPELINE LENGTH = ±8,420 FEET**

**LEGEND**

- = PROPOSED PIPELINE
- = OTHER PIPELINE
- = PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = OTHER WELLS
- = LEASE LINE AND / OR PROPERTY LINE

**TOPOGRAPHIC MAP "D"**

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

DATE SURVEYED: 10-29-08

DATE DRAWN: 11-03-08

REVISED: 12-23-08

**ENDURING RESOURCES**

**Buck Camp Unit 11-22-44-30  
SECTION 30, T11S, R22E, S.L.B.&M.**

**Timberline**

(435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078

**SHEET  
10  
OF 10**



State of Utah  
School & Institutional  
Trust Lands Administration

675 East 500 South, Suite 500  
Salt Lake City, UT 84102-2818  
801-538-5100  
801-355-0922 (Fax)  
[www.trustlands.com](http://www.trustlands.com)

Gary R. Herbert  
Governor

Greg Bell  
Lieutenant Governor

Kevin S. Carter  
Director

February 16, 2010

Al Arlian  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, CO 80202

**RE: Easement No. 1461 – 4" pipeline to service Buck Camp Unit 11-22-44-30 well**  
**Township 11 South, Range 22 East, SLB&M**  
**Section 32: W $\frac{1}{2}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  (within)**

Dear Al,

Enclosed for your file is a fully executed original of the above referenced easement agreement.

Sincerely,

Chris Fausett  
Trust Lands Resource Specialist

Enclosure



## E A S E M E N T

**Fund: School  
Easement No. 1461**

THE STATE OF UTAH, by and through the School and Institutional Trust Lands Administration, GRANTOR, in consideration of the payment of \$8,715.84 plus a \$750.00 application fee, receipt of which is acknowledged, and the promise of GRANTEE to pay an administrative fee as provided by Administration Rules R850-40-1800 and R850-4-200, as amended or replaced, to GRANTOR on or before January 1, 2013, and every third year thereafter, hereby grants to Enduring Resources, LLC, 475 17<sup>th</sup> Street, Suite 1500, Denver, Colorado, 80202, GRANTEE, an Easement on the following described state trust lands:

### UINTAH COUNTY

Township 11 South, Range 22 East, SLB&M

Section 32: W $\frac{1}{2}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  (within)

A 30 foot wide easement located in the W $\frac{1}{2}$  NW $\frac{1}{4}$ , N $\frac{1}{2}$  SW $\frac{1}{4}$ , SE $\frac{1}{4}$  SW $\frac{1}{4}$  and the SW $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 32, T11S, R22E, SLB&M, the easement limits being 15 feet on each side of the following described centerline:

Beginning at a point on the north line of the NW $\frac{1}{4}$  of Section 32, T11S, R22E, SLB&M which bears S89°57'07"E 2.34 feet from the northwest corner of said section, thence S08°43'02"E 128.67 feet; thence S30°57'10"E 175.91 feet; thence S37°53'10"E 406.94 feet; thence S31°35'38"E 161.16 feet; thence S13°01'58"E 98.50 feet; thence S03°43'02"E 213.59 feet; thence S01°21'42"W 185.35 feet; thence S04°29'38"W 207.11 feet; thence S07°54'27"W 194.22 feet; thence S00°32'57"W 205.58 feet; thence S27°44'08"E 117.11 feet; thence S42°34'25"E 189.06 feet; thence S33°19'17"E 130.36 feet; thence S06°12'06"E 132.28 feet; thence S33°23'55"W 114.64 feet; thence S00°56'00"W 159.61 feet; thence S46°26'59"E 84.27 feet; thence N84°10'01"E 132.95 feet; thence S73°49'10"E 63.73 feet; thence S22°41'37"E 80.59 feet; thence S31°00'28"W 51.19 feet; thence S12°41'39"E 281.41 feet; thence S28°06'56"E 144.79 feet; thence S49°02'49"E 161.34 feet; thence S46°51'41"E 158.44 feet; thence S74°41'33"E 98.04 feet; thence N68°20'27"E 160.63 feet; thence N73°04'09"E 198.62 feet; thence N76°31'27"E 116.24 feet; thence S53°22'02"E 133.04 feet; thence S17°40'08"E 83.69 feet; thence S15°55'23"W 321.12 feet; thence S09°15'07"W 318.35 feet; thence S11°02'20"E 154.17 feet; thence S32°19'04"E 228.72 feet; thence S48°28'03"E 135.40 feet; thence S63°22'26"E 142.43 feet; thence S59°04'16"E 129.10 feet; thence S41°54'19"E 140.61 feet; thence S61°04'13"E 138.30 feet; thence S79°57'16"E 256.12 feet; thence S64°04'01"E 142.66 feet; thence S45°03'05"E 156.82 feet; thence S51°24'55"E 204.16 feet; thence S57°28'20"E 152.90 feet; thence S60°43'52"E 163.91 feet; thence S46°13'08"E 15.19 feet to a point on the south line of the SE $\frac{1}{4}$  of said section which bears S89°55'19"E 780.93 feet from the south  $\frac{1}{4}$  corner of said section. Basis of bearings is the north line of the NW $\frac{1}{4}$  of said section which is taken from global positioning satellite observations to bear N89°57'07"W a measured distance of 2649.56 feet. Contains 5.21 acres more or less.

THIS EASEMENT is granted for the purpose of the construction, operation, repair, and maintenance of a 4-inch diameter surface natural gas pipeline on the above-described lands subject to the following terms and conditions:

Easement No. 1461  
Enduring Resources, LLC  
Page 2

1. This Easement shall be for a term of 30 years commencing February 1, 2010, and expiring January 31, 2040, unless earlier terminated under the terms hereof or until GRANTEE, its successors and assigns shall fail to make any payment in accordance with its promise above set forth. This Easement is granted only for the purpose described above as far as it is consistent with the principles and obligations in the Enabling Act of Utah (Act of July 16, 1894, Ch. 138, 28 Stat. 107) and the Constitution of the State of Utah. This Easement is subject to any valid and existing rights.

2. GRANTEE shall pay for all cost and expense in connection with the construction, operation, repair, replacement, and hold GRANTOR harmless from any and all liability (including expenses for attorney's fees) which may arise from the construction, operation, and maintenance of said pipeline so long as the Easement shall remain in force and effect. All work performed in connection with this Easement shall be conducted in a workmanlike manner.

3. GRANTOR reserves the right to relocate or modify the Easement, in whole or in part, as may be deemed necessary by GRANTOR, in its sole discretion, to accommodate GRANTOR's use of the dominant estate or the adjoining lands for any purpose. The cost of such relocation shall be at GRANTEE's sole expense. The relocated or modified Easement shall provide GRANTEE with access such as is necessary to fulfill the purposes of the grant.

4. GRANTEE shall have sixty (60) days after the expiration or termination of this Easement to remove said pipeline if GRANTOR determines it is in GRANTOR's best interest, and upon written notification from GRANTOR. In the event the same is not removed within sixty (60) days of GRANTEE'S receipt of written notice, it is mutually agreed by and between GRANTOR and GRANTEE that GRANTOR shall have the right to remove, or cause the same to be removed, all at the cost and expense of GRANTEE.

5. GRANTEE represents that it has notified holders of state issued interests in the area surrounding the Easement, as set forth in Exhibit "A" attached hereto, of GRANTEE's rights and plans hereunder. GRANTEE represents that the location and construction of this Easement will not unreasonably interfere with or cause damage to such other existing users.

6. GRANTEE agrees that, for good cause shown, at any time during the term of this Easement, GRANTOR may require that the amount of an existing bond be increased or if a bond has not been previously required, GRANTOR may require GRANTEE to post with GRANTOR a bond with an approved corporate surety company authorized to transact business in the State of Utah, or such other surety as may be acceptable to GRANTOR, in a sum to be determined by GRANTOR, said bond to be conditioned upon full compliance with all terms and conditions of this Easement and the rules relating hereto. The amount of this bond shall not be deemed to limit any liability of GRANTEE.

7. GRANTEE assumes liability for and agrees to indemnify GRANTOR for and against any and all liability, including attorney's fees, of any nature imposed upon, incurred by, or asserted against GRANTOR which in any way relates to or arises out of the activity or presence upon the

Easement No. 1461  
Enduring Resources, LLC  
Page 3

Easement of GRANTEE, its servants, employees, agents, sublessees, assignees, or invitees, unless such liability is caused by GRANTOR's sole negligence.

8. This Easement may be terminated by GRANTOR upon breach of any conditions hereof. If GRANTOR determines that GRANTEE, its assigns or successors in interest have breached any conditions of this Easement, GRANTOR shall notify the breaching party (parties) in writing by certified mail, return receipt requested, specifying the particular breach. The breaching party (parties) shall have thirty (30) days from the date of such notice, or such longer period as may be required under the circumstances as approved by GRANTOR to correct such breach. If breaching party (parties) fails (fail) to correct such breach within such period, GRANTOR may terminate this Easement without further notice; provided, however, such termination shall not release breaching party (parties) from liability for damage prior to such termination.

9. GRANTEE hereby consents to suit in any dispute arising under the terms of the Easement or as a result of operations carried out under the Easement. GRANTEE further agrees for itself, successors and assigns that any suit brought in connection with this Easement shall be brought in the Third District Court for Salt Lake County, Utah, subject, however, to any legal requirement for prior exhaustion of administrative remedies.

10. The acquisition or assumption by another party under an agreement, such as an assignment, sublease, contract, or any other agreement, with GRANTEE of any right or obligation of GRANTEE under this Easement shall be ineffective as to GRANTOR unless and until GRANTOR shall have been notified of such agreement and shall have recognized and approved the same in writing, and in no case shall such recognition or approval: (i) operate to relieve GRANTEE of the responsibilities or liabilities assumed by GRANTEE hereunder; or (ii) be given unless such other party is acceptable to GRANTOR as a grantee, and assumes in writing all of the obligations of GRANTEE under the terms of this Easement as to the balance of the term thereof, or acquires the rights in trust as security and subject to such conditions as GRANTOR deems necessary. GRANTOR may refuse to grant approval for such an agreement in its sole discretion.

11. GRANTEE shall at all times observe reasonable precautions to prevent fire on said Easement and shall comply with all applicable laws and regulations of any governmental agency having jurisdiction. In the event of a fire on said Easement proximately caused by GRANTEE, its servants, employees, agents, sublessees, assignees or licensees which necessitates suppression action by the State Forester or any other government entity incurring supplemental costs, GRANTEE agrees to reimburse GRANTOR for the cost of such fire suppression action.

12. GRANTEE shall surrender to GRANTOR said lands in the original land contour in order to allow the area to properly drain within 60 days of the termination of this Easement. Rehabilitation shall be done with the approval and to the specifications of GRANTOR.

13. GRANTEE, in exercising the privileges granted by this Easement, shall comply with the provisions of all Federal, State, County, and Municipal laws, ordinances, and regulations which are applicable to the subject tract and operations covered by this Easement. GRANTEE shall neither commit nor permit any waste on the Easement premises. GRANTEE shall take reasonable

Easement No. 1461  
Enduring Resources, LLC  
Page 4

precautions to prevent pollution or deterioration of lands or waters which may result from the exercise of the privileges granted pursuant to this Easement.

14. GRANTOR herein reserves the right to utilize said Easement for access to and from the lands owned by GRANTOR on both sides of said Easement.

15. It is expressly understood and agreed that the right herein granted is non-exclusive and GRANTOR hereby reserves the right to issue other non-exclusive easements, leases, or permits on or across the subject property where GRANTOR deems such uses appropriate and compatible. GRANTOR hereby reserves the right to dispose of the property by sale or exchange.

16. GRANTOR expressly reserves the right to lease said land for the exploration, development and production of oil, gas and all other minerals, together with the right of ingress and egress across said Easement.

17. GRANTEE agrees that the removal of ordinary sand and gravel or similar materials from the Easement is not permitted except when GRANTEE has applied for and received a materials permit from GRANTOR.

18. GRANTEE agrees that no trees may be cut or removed from the Easement except when GRANTEE has applied for and received a small forest products permit or timber contract from GRANTOR.

19. It is hereby understood and agreed that all treasure-trove, all articles of antiquity, and critical paleontological resources in or upon the subject lands are and shall remain the property of GRANTOR. GRANTEE agrees that all costs associated with archeological and paleontological investigations on the subject lands that may be required by GRANTOR will be borne by GRANTEE. GRANTEE further agrees to cease all activity on the subject lands and immediately notify GRANTOR if any discovery of human remains or a "site" or "specimen," as defined in Section 9-8-302 or 63-73-1 Utah Code Annotated (1953), as amended, is made on the subject lands, and continue to cease all construction or maintenance therein until such time as the human remains, "site" or "specimen" in question has been treated to the satisfaction of GRANTOR.

20. GRANTOR claims title in fee simple, but does not warrant to GRANTEE the validity of title to these premises. GRANTEE shall have no claim for damages or refund against GRANTOR for any claimed failure or deficiency of GRANTOR's title to said lands or for interference by any third party.

21. GRANTOR reserves the right to inspect the area subject to the Easement at any time and recall GRANTEE for correction of any violations of stipulations contained herein. If GRANTEE fails to correct such violations within a reasonable time GRANTOR may, after thirty (30) days written notice, re-enter and terminate this Easement.

22. This Easement is granted pursuant to the provisions of all applicable laws and subject to the rules of the departments and agencies of the State of Utah presently in effect and to such laws and rules as may be hereafter promulgated by the State.

Easement No. 1461  
Enduring Resources, LLC  
Page 5

23. Any notice contemplated herein to be served upon GRANTEE shall be in writing and shall be deemed sufficient if deposited in the United States mail, postage prepaid and certified or registered, and addressed as follows:

Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202

or at any such other address as GRANTEE may from time to time designate by written notice to GRANTOR.

24. This Easement shall be interpreted and governed by the laws of the State of Utah and the provisions hereof shall inure to and be binding upon the successors and assigns of GRANTEE.

25. No Waiver of Conditions by GRANTOR of any default of GRANTEE or failure of GRANTOR to timely enforce any provisions of this Easement shall constitute a waiver of or constitute a bar to subsequent enforcement of the same or other provisions of this Easement. No provision in this Easement shall be construed to prevent GRANTOR from exercising any legal or equitable remedy it may otherwise have.



Easement No. 1461  
Enduring Resources, LLC  
Page 6

IN WITNESS WHEREOF, the State of Utah, by and through the School and Institutional Trust Lands Administration, has caused these presents to be executed this 16<sup>th</sup> day of February, 2010 by the Director.

GRANTOR: STATE OF UTAH  
School and Institutional  
Trust Lands Administration  
675 East 500 South, Suite 500  
Salt Lake City, Utah 84102-2818

By:

  
\_\_\_\_\_  
KEVIN S. CARTER, DIRECTOR

GRANTEE: ENDURING RESOURCES, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202

By:

  
\_\_\_\_\_  
Its: VICE PRESIDENT

APPROVED AS TO FORM  
MARK L. SHURTLEFF  
ATTORNEY GENERAL

By: /s:/ Stephanie Barber-Renteria  
Special Assistant Attorney General

Easement No. 1461  
Enduring Resources, LLC  
Page 7

STATE OF UTAH )  
 )  
COUNTY OF SALT LAKE ) §

On the 16<sup>th</sup> day of Feb, 2010, appeared before me Kevin S. Carter, the Director of the School and Institutional Trust Lands Administration of the State of Utah (SITLA), who, his identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of SITLA, has authorized him to execute the foregoing Easement, and did duly acknowledge in my presence having executed the same for the purpose stated therein.

My commission expires:

5/25/2010

Notary Public, residing at:

Alice K. Kearney

STATE OF COLORADO )  
CITY AND )  
COUNTY OF DENVER ) §



On the 4TH day of FEBRUARY, 2010, appeared before me ALEX B. CAMPBELL, the VICE PRESIDENT of ENDURING RESOURCES, LLC, who, his/her identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of ENDURING RESOURCES, LLC, has authorized him/her to execute the foregoing Easement, and did duly acknowledge in my presence having executed the same for the purpose stated therein.

My commission expires:



My Commission Expires 09/09/2010

Notary Public, residing at:

6860 SOUTH SAUDA CT  
FOXFIELD, COLORADO 80016

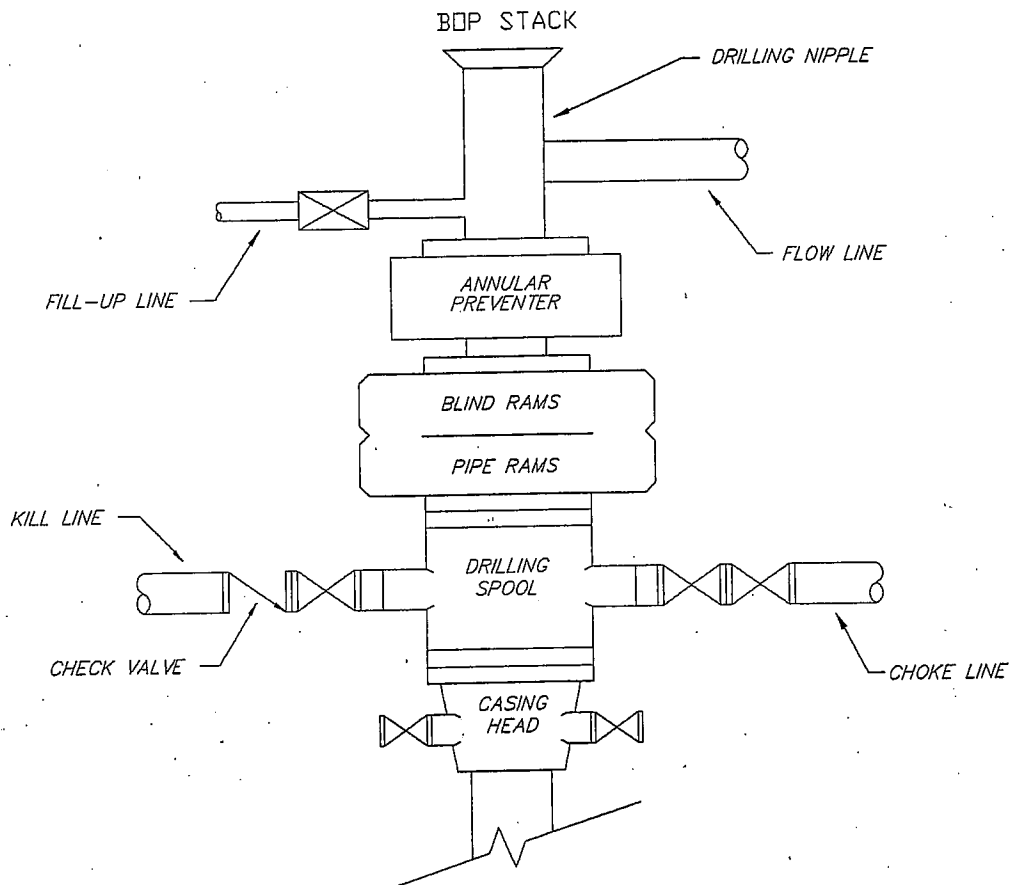
Easement No. 1461  
Enduring Resources, LLC  
Page 8

**EASEMENT NO. 1461**  
**Exhibit "A"**

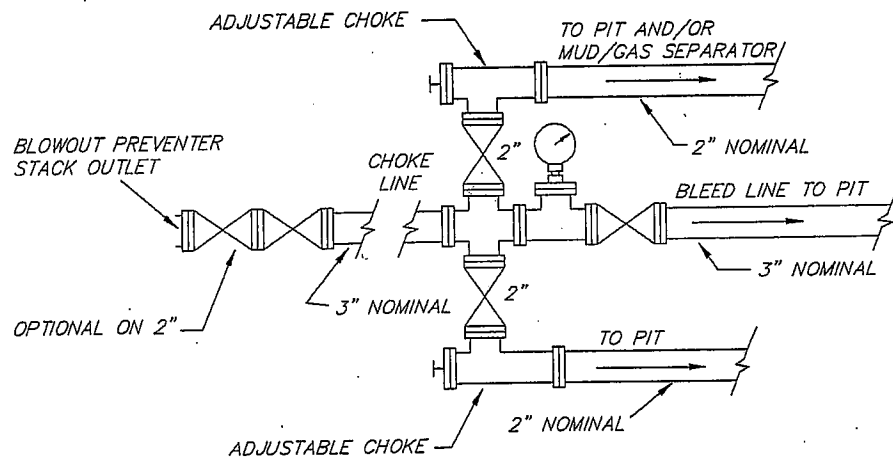
Easement No. 1134	Enduring Resources, LLC 475 – 17 <sup>th</sup> Street, Suite 1500 Denver, CO 80202
Special Use Lease No. 1500	Enduring Resources, LLC 475 – 17 <sup>th</sup> Street, Suite 1500 Denver, CO 80202
Mineral Lease No. 47076	Enduring Resources, LLC 475 – 17 <sup>th</sup> Street, Suite 1500 Denver, CO 80202
Mineral Lease No. 22348-A	Kerr McGee Oil and Gas Onshore, LP P.O. Box 173779 Denver, CO 80217-3779
Mineral Lease No. 48803	Millennium Synfuels, LLC 1245 Brickyard Road, Suite 90 Salt Lake City, UT 84106

# ENDURING RESOURCES, LLC

## TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



## TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC



**IPC #08-327**

# **Paleontological Reconnaissance Survey Report**

---

**Survey of Enduring's Proposed Well Pad, Access Road, Road  
Reroute and Pipelines for "Buck Camp #11-22-44-30  
& #12-22-31-2" (Sec. 29, 30, 32, T 11 S, R 22 E)  
& (Sec. 2 & 5, T 12 S, R 22 E)**

**Buck Camp Canyon  
Topographic Quadrangle  
Uintah County, Utah**

November 24, 2008

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078

## INTRODUCTION

At the request of Al Arlian of Enduring Resources and authorized by James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Enduring's proposed well pad, access road, road reroute, and pipelines for "Buck Camp #11-22-44-30 & #12-22-31-2" (Sec. 29, 30, 32, T 11 S, R 22 E) & (Sec. 2 & 5, T 12 S, R 22 E) was conducted by David Alderks on November 18, 2008. The survey was conducted under Utah Paleontological Investigations Permit #07-356. This survey to collect any paleontological materials discovered during the construction processes in danger of damage or destruction was done to meet requirements of the National Environmental Policy Act of 1969, and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the State of Utah, paleontologically-sensitive geologic formations on State lands that may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579).
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603.

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
  - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
  - **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but

little information about the paleontological resources of the unit or the area is known.

- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

## LOCATION

Enduring's proposed well pad, access road, road reroute, and pipelines for "Buck Camp #11-22-44-30 & #12-22-31-2" (Sec. 29, 30, 32, T 11 S, R 22 E) & (Sec. 2 & 5, T 12 S, R 22 E) are located on lands managed by the State of Utah Trust Lands Administration (SITLA) on East Bench between Sand Wash and Bitter Creek, 5-6 miles southwest of the White River, and some 30 miles southwest of Bonanza, Utah. The project area can be found on the Buck Camp Canyon 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

## PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late

Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

## **GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW**

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River



Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

## **FIELD METHODS**

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

## **PROJECT AREA**

The project area is situated in the Green River Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

### **Buck Camp #11-22-44-30**

The proposed pipeline and access road start in the NE/NE quarter-quarter section of Sec. 5, T 12 S, R 22 E and run northwest to the well pad located in the SE/SE quarter-quarter section of Sec. 30, T 11 S, R 22 E (Figure 1). The proposed access road follows along an existing two-track, which is located in alluvial deposits. The pipeline follows next to the two-track. Both the access road and the pipeline are located in hilly terrain and cross several small fluvial sandstone deposits of tan, medium-grained with litho-feldspathic fragments. The well pad is located in hilly terrain just above the wash and is covered in colluvium supporting sagebrush and desert grasses. No fossils were found.

### **Pipeline for Buck Camp #12-22-31-2**

The proposed pipeline is located in the NW/NE quarter-quarter section of Sec. 2, T 12 S, R 22 E (Figure 2). The proposed pipeline is approximately 0.7 mile long and follows the existing road running to the well pad. The pipeline is located mainly in talus with a few areas where the underlying gray shale bedrock is exposed. The shale layers alternate between more resistive layers and easily eroded layers. No fossils were found.

**SURVEY RESULTS**

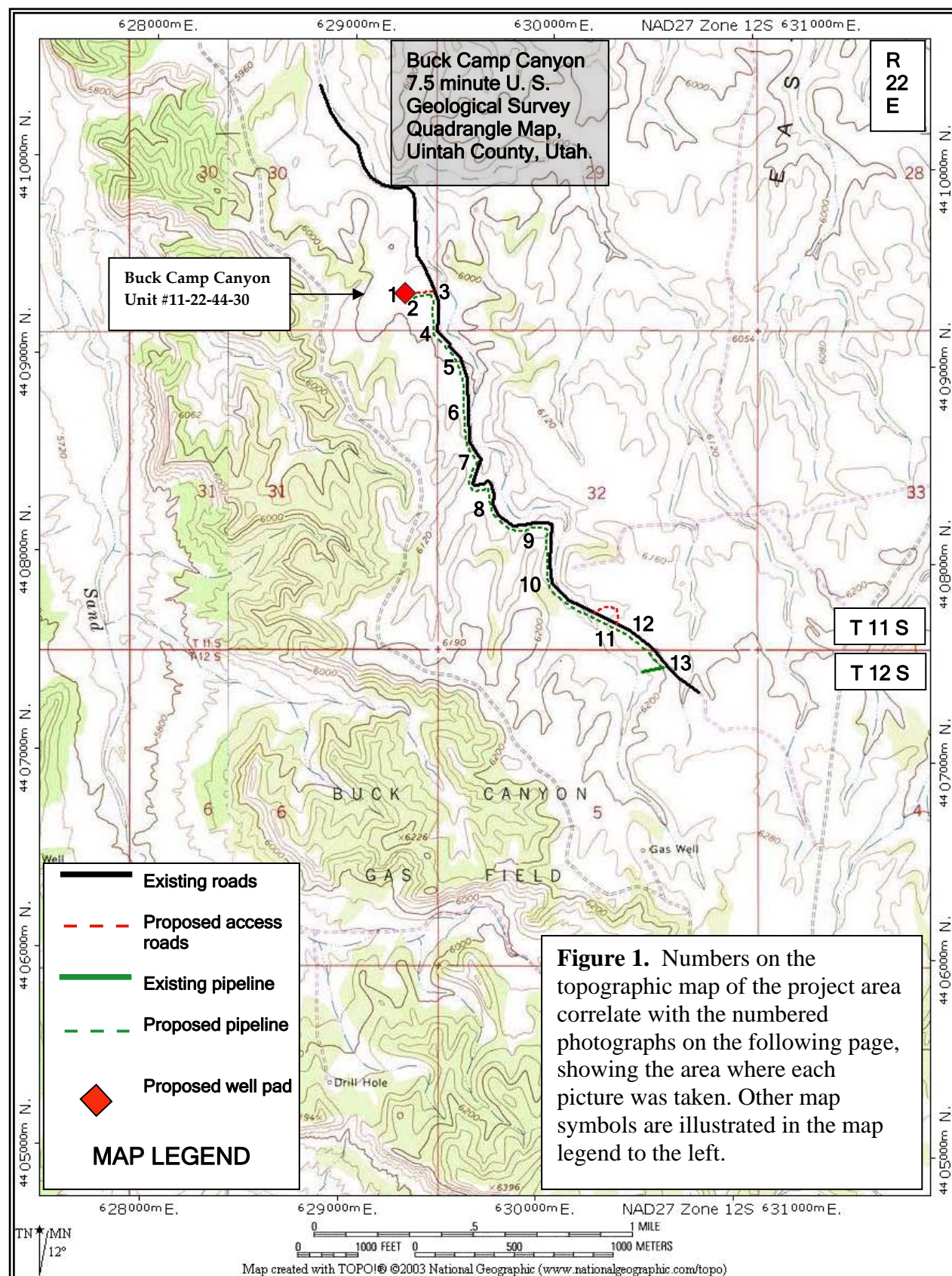
<b>PROJECT</b>	<b>GEOLOGY</b>	<b>PALEONTOLOGY</b>
<b>“Buck Camp #11-22-44-30”</b> (Sec. 29, 30, 32, T 11 S, R 22 E) & (Sec. 5, T 12 S, R 22 E)	The proposed access road follows along an existing two-track, which is located in alluvial deposits. The pipeline follows next to the two-track. Both the access road and the pipeline are located in hilly terrain and cross several small fluvial sandstone deposits of tan, medium-grained with litho-feldspathic fragments. The well pad is located in hilly terrain just above the wash and is covered in colluvium supporting sagebrush and desert grasses.	No fossils were found. <b>Class 3a</b>
<b>“Pipeline for Buck Camp #12-22-31-2”</b> (Sec. 2, T 12 S, R 22 E)	The proposed pipeline is approximately 0.7 mile long and follows the existing road running to the well pad. The pipeline is located mainly in talus with a few areas where the underlying gray shale bedrock is exposed. The shale layers alternate between more resistive layers and easily eroded layers.	No fossils were found. <b>Class 3a</b>

**RECOMMENDATIONS**

A reconnaissance survey was conducted for Enduring’s proposed well pad, access road, and pipelines for “Buck Camp #11-22-44-30 & #12-22-31-2” (Sec. 29, 30, 32, T 11 S, R 22 E) & (Sec. 2 & 5, T 12 S, R 22 E). The well pad, access road, road reroute, and pipelines covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Green River formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

**Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage.**

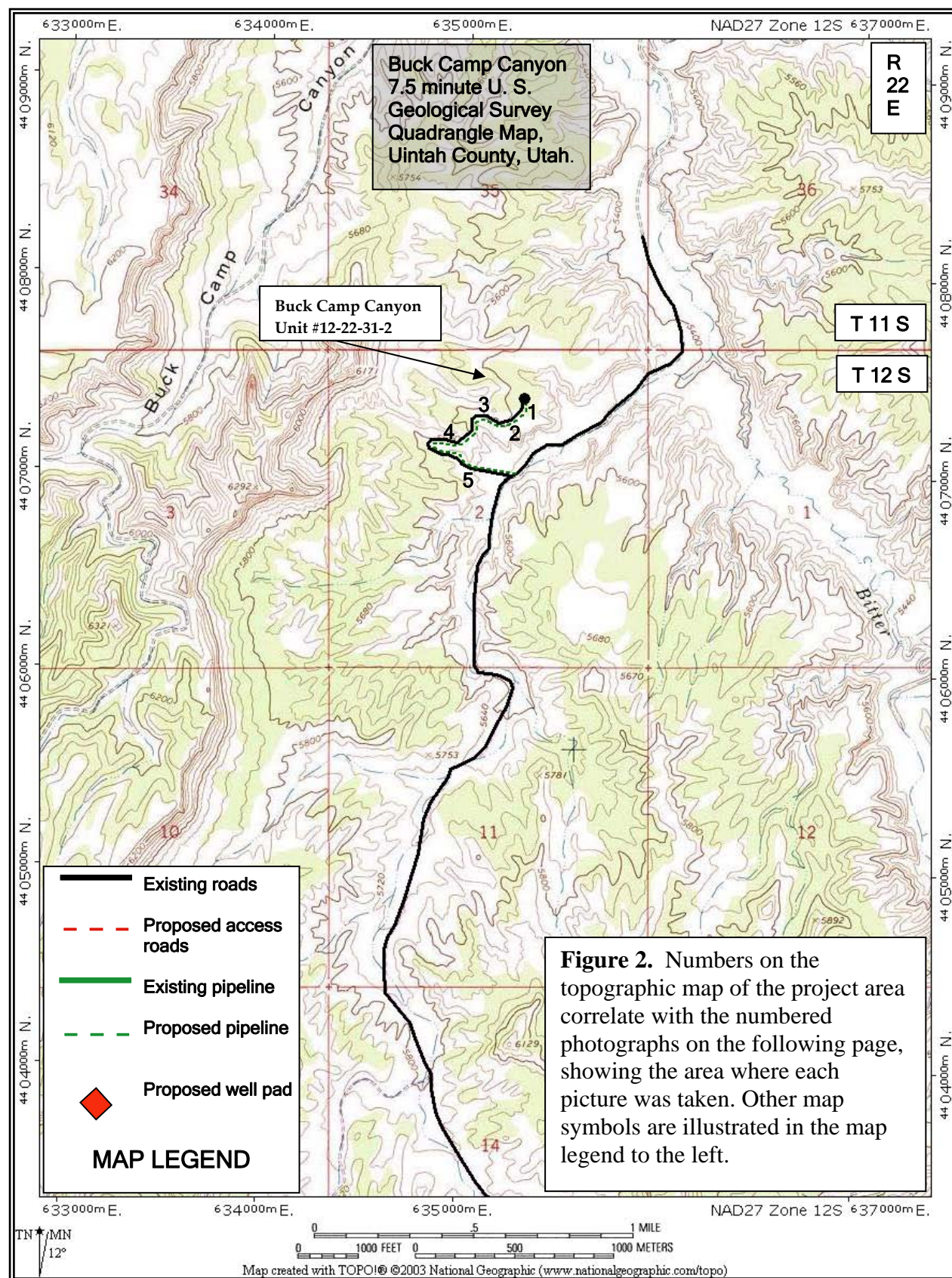




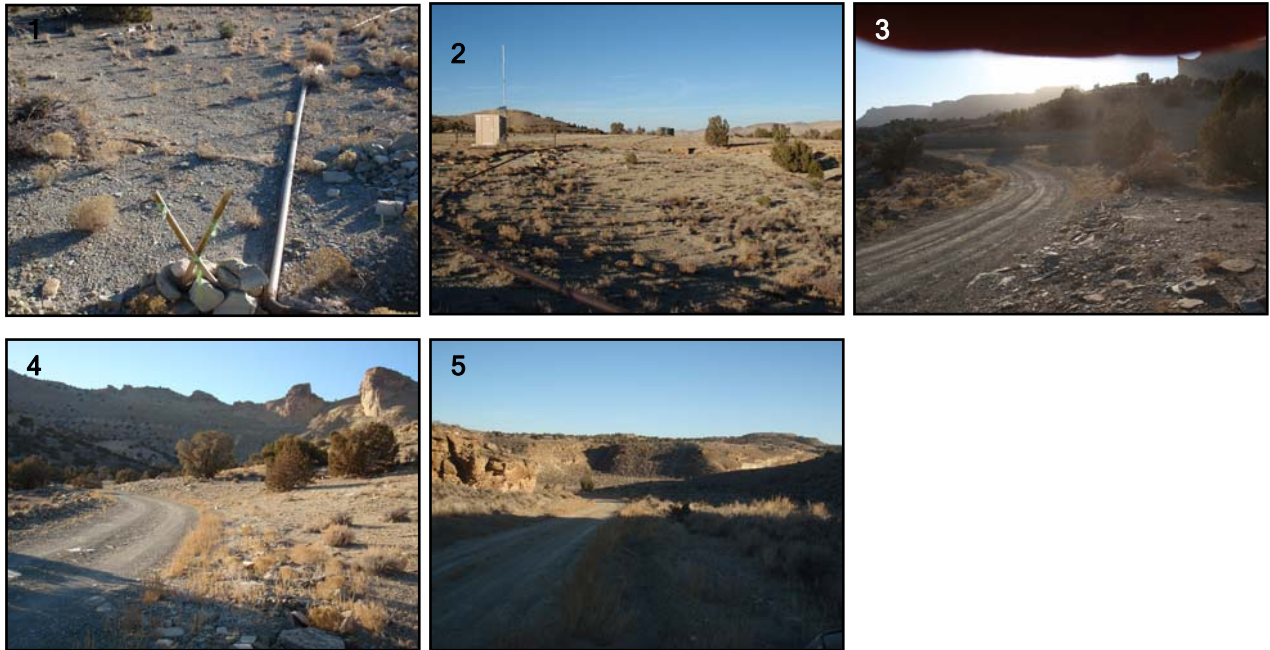
**Figure 1.** *continued...*







**Figure 2.** *continued...*





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CULTURAL RESOURCE INVENTORY OF  
ENDURING RESOURCES' PROPOSED  
WELL LOCATION BUCK CAMP UNIT #11-22-44-30  
(T11S, R22E, SECTION 30)  
UINTAH COUNTY, UTAH

CULTURAL RESOURCE INVENTORY OF  
ENDURING RESOURCES' PROPOSED  
WELL LOCATION BUCK CAMP UNIT #11-22-44-30  
(T11S, R22E, SECTION 30)  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Bureau of Land Management  
Vernal Field Office  
and  
State of Utah  
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 08-377

December 11, 2008

United States Department of Interior (FLPMA)  
Permit No. 08-UT-60122

State of Utah Public Lands Policy  
Archaeological Survey Permit No. 117

State of Utah Antiquities Project (Survey)  
Permit No. U-08-MQ-1214bs

## INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants, Inc. (MOAC) in December 2008 for Enduring Resources' proposed Buck Camp Unit #11-22-44-30 well location with associated pipeline/access corridor. The project area occurs east of Buck Camp Canyon and Bitter Creek, in Uintah County, Utah. The survey was implemented at the request of Mr. Al Arlian, Enduring Resources, LLC, Denver, Colorado. Land status is public land administered by the Bureau of Land Management (BLM), Vernal Field Office, and State of Utah School and Institutional Trust Lands Administration (SITLA) property.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental and Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed on December 10, 2008 by Keith Montgomery (Principal Investigator) under the auspices of U.S.D.I. (FLPMA) Permit No. 08-UT-60122, State of Utah Public Lands Policy Coordination Office Permit No. 117, and State of Utah Antiquities Permit (Survey) No. U-08-MQ-1214bs issued to MOAC, Moab, Utah.

A file search was completed by consulting NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP Uintah County, Utah (Patterson et al. 2007). This review, a Class I existing data review of 457 one-square-mile sections spanning several existing NBU oil and gas fields in Uintah County, Utah, contains the current project area. Record searches were performed by Marty Thomas at the Utah State Historic Preservation Office on multiple dates throughout 2007 (January 16, 18, 22, and 29). This consultation indicated that four previous cultural resource inventories have been conducted in or near the current project area.

In 2002, Montgomery Archaeological Consultants (MOAC) completed a cultural resource inventory under contract with Buys and Associates for the Veritas DGC Land, Inc. Uintah Seismic Project. The inventory resulted in 75 archaeological sites, none of which occur within the current project area (Elkins and Montgomery 2002). In 2006, MOAC completed an inventory for Enduring Resources' Buck Camp Disposal Pit #2 resulting in no cultural resources (Lower-Eskelson 2006). Also in 2006, MOAC surveyed Enduring Resources' Buck Camp Canyon 11-22-43-29 and 11-22-44-31 well locations; no archaeological sites were documented (Jendresen 2006). In 2007, MOAC inventoried Enduring Resources' Buck Camp Unit 12-22-23-5 well location resulting in negative finds (Seacat 2007).



## DESCRIPTION OF THE PROJECT AREA

The project area is located in the Buck Canyon Gas Field along the southwest side of East Bench, Uintah County, Utah. The legal description is Township 11 South, Range 22 East, Sections 29, 30, 32; Township 12 South, Range 22 East Section 5 (Table 1 and Figure 1). A total of 52.5 acres was inventoried for cultural resources of which 16.3 acres occur on public land administered by the BLM (Vernal Field Office), and 36.2 acres is on SITLA property.

Table 1. Enduring Resources' Proposed Buck Camp Well Location.

Well Location Designation	Well Pad Location	Pipeline/Access	Cultural Resources
Buck Camp Unit #11-22-44-30	SE/SE Sec. 30, T11S, R22E	Pipeline: 8603 ft Access: 508 ft	None

### Environmental Setting

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits which include Paleocene age deposits, and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops formed by fluvial deposited, stream laid, interbedded sandstone and mudstone, and is known for its prolific paleontological localities.

Specifically, the project area is situated in the Buck Canyon Gas Field along the southwest side of East Bench. Surface geology consists of hard pan residual soil armored with shale and sandstone pebbles. Elevation ranges between 6000 ft and 6200 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, prickly pear cactus, Indian ricegrass and other grasses. Modern disturbances include roads and oil/gas development.

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At the proposed well location, a 10 acre square parcel was defined, centered on the well pad center stake. The interior of the well was examined for cultural resources by the archaeologist walking parallel transects spaced no more than 10 m (33 ft) apart. The access and pipeline routes were surveyed to a width of 200 ft (61 m). Ground visibility was considered good. A total of 52.5 acres was inventoried for cultural resources of which 16.3 acres occur on public land administered by the BLM (Vernal Field Office), and 36.2 acres is on SITLA property.

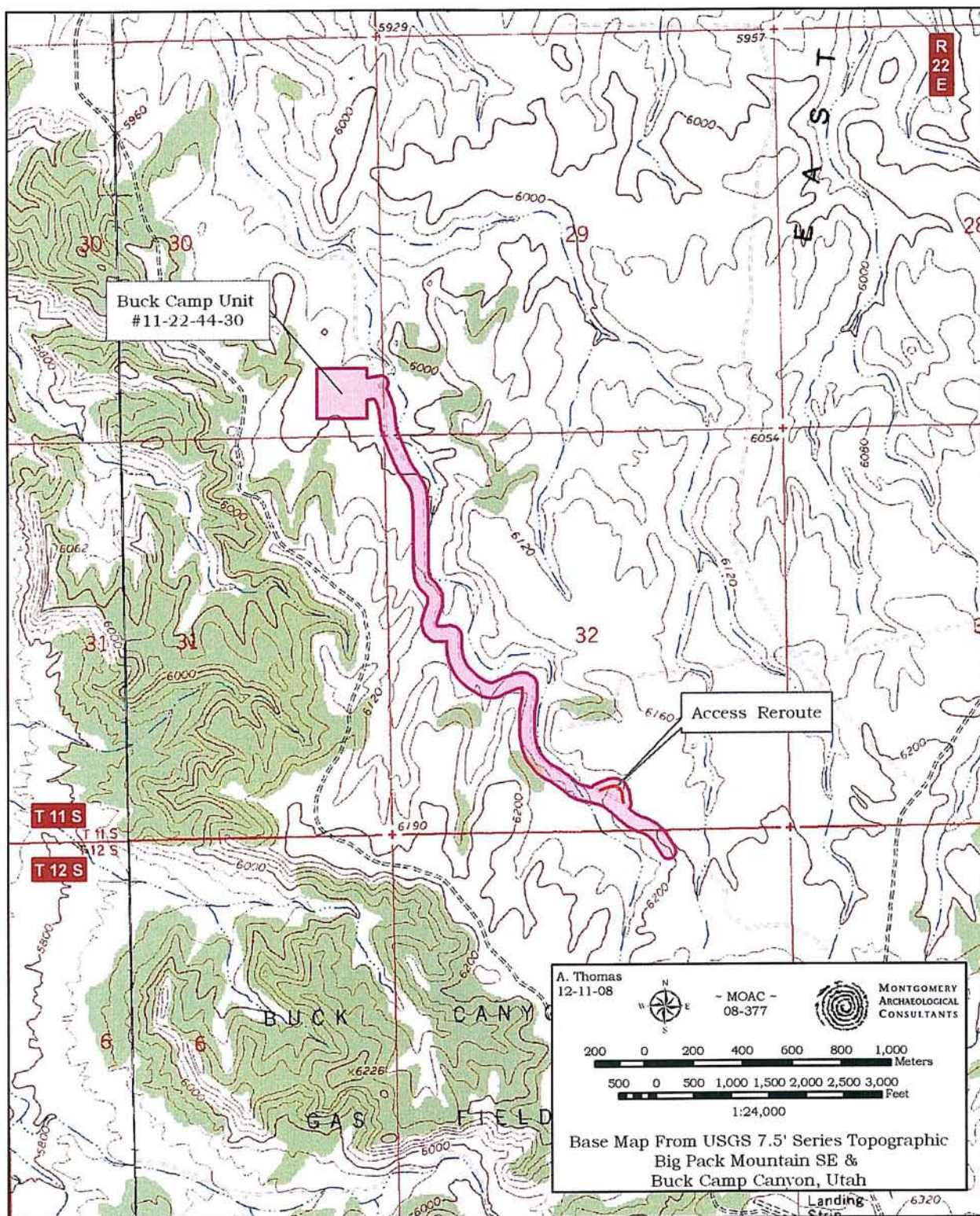


Figure 1. Inventory Area of Enduring Resources' Proposed Buck Camp Unit #11-22-44-30 Well with Associated Pipeline/Access Corridor, Uintah County, Utah.



## RESULTS AND RECOMMENDATIONS

The inventory of Enduring Resources' proposed Buck Camp Unit 11-22-44-30 well location with associated pipeline/access corridor resulted in the location of no cultural resources. Based on this finding, a determination of "no adverse impact" is recommended for the project pursuant to Section 106, CFR 800.

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**Enduring Resources, LLC  
Buck Camp Unit 11-22-44-30  
SESE Sec. 30, T11S-R22E  
Uintah County, Utah**

**Federal Lease: UTU-73907**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. Existing Roads:**

FROM THE INTERSECTION OF U.S. HIGHWAY 40 AND 500 EAST STREET IN VERNAL, UTAH PROCEED IN AN EASTERLY THEN SOUTHERLY DIRECTION ALONG U.S. HIGHWAY 40 APPROXIMATELY 3.3 MILES TO THE JUNCTION OF STATE HIGHWAY 45; EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 45 APPROXIMATELY 20.1 MILES TO ITS JUNCTION WITH THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG COUNTY B ROAD 3260 APPROXIMATELY 15.0 MILES TO THE MOUNTAIN FUEL BRIDGE. CONTINUE SOUTHWESTERLY ALONG COUNTY B ROAD 3260 APPROXIMATELY 9.4 MILES TO ITS INTERSECTION WITH THE BITTER CREEK ROAD (COUNTY B ROAD 4120). EXIT LEFT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG COUNTY B ROAD 4120 APPROXIMATELY 4.6 MILES TO ITS INTERSECTION WITH THE EAST BENCH ROAD. EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG THE EAST BENCH ROAD APPROXIMATELY 9.2 MILES TO ITS INTERSECTION WITH A SERVICE ROAD TO THE NORTHWEST. EXIT RIGHT AND PROCEED IN A NORTHWESTERLY DIRECTION ALONG SERVICE ROAD APPROXIMATELY 0.8 MILES TO THE INTERSECTION OF A CLASS D COUNTY ROAD TO THE NORTHWEST. EXIT RIGHT AND FOLLOW CLASS D COUNTY ROAD IN A NORTHWESTERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION APPROXIMATELY 360 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 64.2 MILES IN A SOUTHERLY DIRECTION.

**2. Planned Access Roads:**

I. The proposed access road will be approximately 1,000 feet of new construction (rerouting road) all a Uintah County Class D Road, and 360 feet of new construction on-lease;

- a. 365' off-lease road reroute in Sec. 5-T12S-R22E (a Uintah County Class D Road),
- b. 635' STILA road reroute in Sec 32-T11S-R22E (a Uintah County Class D Road), and
- c. 360' on-lease new road in the SESE of Sec 30-T11S-R22E.

Please refer to Topo Map "B" for the takeoff point for the new road construction.

***Concurrently herewith permission to re-route the road and improve the Uintah County Class D Road shall be requested from Uintah County (and SITLA).***

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

**3. Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" attached):**

The following wells are wells located within a one (1) mile radius of the proposed location.

- |    |       |                  |
|----|-------|------------------|
| a. | None: | Water Wells:     |
| b. | None: | Injection Wells: |
| c. | None: | Producing Wells: |
| d. | None: | Drilling Wells:  |
| e. | None: | Shut-in Wells:   |

- f. None: Temporarily Abandoned Wells:
- g. None: Disposal Wells:
- h. None: Abandoned Wells:
- i. None: Dry Holes:
- j. None: Observation Wells:
- k. (1): Pending (staked) Wells:

1. East Bench 11-22-31-32 (NWNE-32-11S-22E)

#### 4. Location of Existing and/or Proposed Facilities:

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be Dark Olive Black. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline:	ON-LEASE	695'	BLM
	OFF-LEASE	335'	BLM
	OFF-LEASE	385'	BLM
	SITLA	7,005'	SITLA

A surface gas gathering line and related equipment shall be installed for year around usage. Approximately 8,420 feet of 4" or less surface, steel, unpainted, gas gathering pipeline shall be laid to minimize surface disturbance.

***Concurrently herewith a road right-of-way for the off-lease portion of the road located on off-lease BLM lands in Sec 29-11S-22E and Sec 5-12S-22E is requested.***

***A SITLA pipeline application has been submitted to SITLA for the pipeline located in Sec 32-11S-22E***



The proposed pipeline will begin at the well site, be laid by the south side of the access road, then south along the west side of the existing county Class D road and tie-in to an existing pipeline.

All State and County roads will be bored under upon State and County approvals to do so.

The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**5. Location and Type of Water Supply:**

Whenever practical, water will be obtained from Enduring Resources LLC Water Right Number 49-2279 (\*See Townships of permitted Use below). If those sources are not available, a new water source shall be submitted prior to commencing operations. (This permit has a one-year term and then must be renewed)

\*Enduring Water Permit' Townships of Use:

T10S-R22E	T11S-R22E	T12S-R22E
T10S-R23E	T11S-R23E	T12S-R23E
T10S-R24E	T11S-R24E	T12S-R24E

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the following Enduring water disposal wells.

A. Buck Camp 11-22-14-36 WDW                      T11S-R22E, Sec 36: SWSW, or  
if not available,

B. Southman Canyon 9-23-22-36 WDW                      T9S-R23E, Sec 36: SENW.

**8. Ancillary Facilities:**

During drilling operations, approximately 30 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

**9. Well Site Layout: (Refer to Sheets #2, #3, and #4)**

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- d. Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.
- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.

**10. Plans for Surface Reclamation:**

**Producing Location:**

- a. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.
- b. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- c. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- d. The reserve pit and that portion of the location not needed for production facilities / operations will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- e. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- f. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

**Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**Seed Mixture for Windrowed Top Soil Will Included:**

To be provided by the BLM

**11. Surface Ownership: Location, Access and Pipeline Route:**

Wellsite: Bureau of Land Management

Access: Bureau of Land Management

Pipeline: Bureau of Land Management, and SITLA



## 12. Other Information

### On-site Inspection for Location, Access and Pipeline Route:

The on-site was conducted on December 17, 2008

Attending were:

1. Anna Figueroa - BLM
2. Scott Ackerman - BLM
3. Kolby Kay – Timberline Surveying
4. Carroll Estes - Enduring Resources

### Special Conditions of Approval:

**None for this well(s).**

### Archeology:

- a. A Cultural Resource Inventory Report is ***being prepared*** by Montgomery Archaeological Consultants.

### Paleontology:

- b. A Paleontology Reconnaissance Report ***has been prepared*** by Intermountain Paleo-Consulting and a copy is attached.

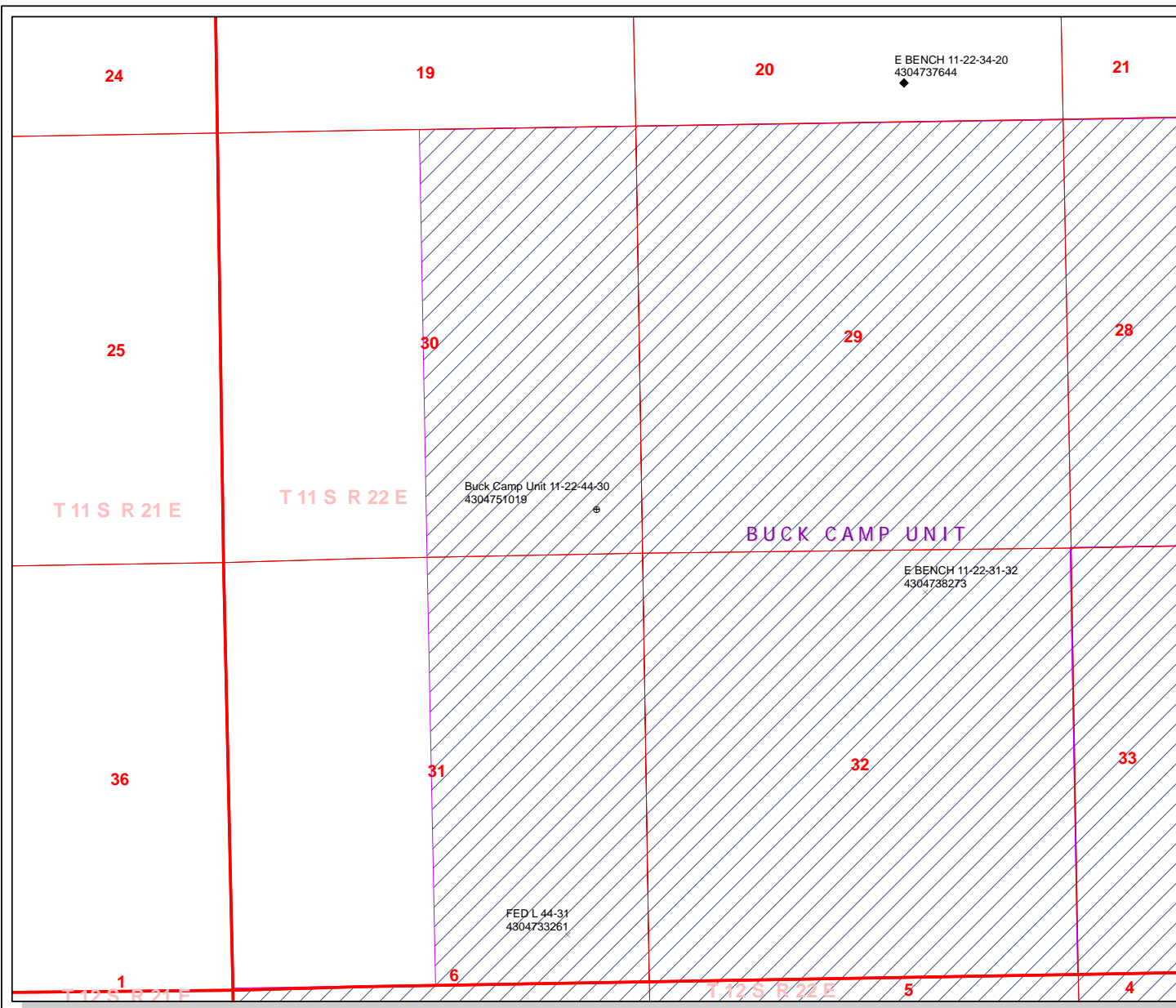
If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

## 13. Lessee's or Operator's Representatives:

### Representatives:

Alvin R. (Al) Arlian  
Landman – Regulatory Specialist  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
Office Tel: 303-350-5114  
Fax Tel: 303-573-0461  
[aarlian@enduringresources.com](mailto:aarlian@enduringresources.com)

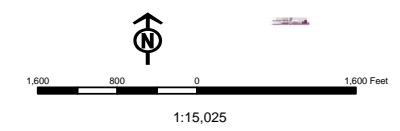
Carroll Estes  
Utah Production Superintendent  
Enduring Resources, LLC  
759 East 500 South  
Vernal, UT 84078  
Office Tel: 435-781-0172  
Fax Tel: 435-781 0174  
[cestest@enduringresources.com](mailto:cestest@enduringresources.com)



**API Number: 4304751019**  
**Well Name: Buck Camp Unit 11-22-44-30**  
**Township 11.0 S Range 22.0 E Section 30**  
**Meridian: SLBM**  
**Operator: ENDURING RESOURCES, LLC**

Map Prepared:  
 Map Produced by Diana Mason

- |               |                                    |
|---------------|------------------------------------|
| <b>Units</b>  | <b>Wells Query</b>                 |
| <b>STATUS</b> | <b>Status</b>                      |
| ACTIVE        | APD - Approved Permit              |
| EXPLORATORY   | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE   | GIW - Gas Injection                |
| NF PP OIL     | GS - Gas Storage                   |
| NF SECONDARY  | LA - Location Abandoned            |
| PI OIL        | LOC - New Location                 |
| PP GAS        | OPS - Operation Suspended          |
| PP GEOTHERMAL | PA - Plugged Abandoned             |
| PP OIL        | PGW - Producing Gas Well           |
| SECONDARY     | POW - Producing Oil Well           |
| TERMINATED    | RET - Returned APD                 |
| <b>Fields</b> | SGW - Shut-in Gas Well             |
| Sections      | SOW - Shut-in Oil Well             |
| Township      | TA - Temp. Abandoned               |
|               | TW - Test Well                     |
|               | WDW - Water Disposal               |
|               | WW - Water Injection Well          |
|               | WSW - Water Supply Well            |



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

April 19, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Buck Camp Unit,  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2010 within the Buck Camp Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ MESA VERDE)

43-047-51019 Buck Camp Unit 11-22-44-30 Sec 30 T11S R22E 0565 FSL 0534 FEL

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File - Buck Camp Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:4-19-10

# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 3/17/2010

**API NO. ASSIGNED:** 43047510190000

**WELL NAME:** Buck Camp Unit 11-22-44-30

**OPERATOR:** Enduring Resources, LLC (N2750)

**PHONE NUMBER:** 303 350-5114

**CONTACT:** Alvin Arlian

**PROPOSED LOCATION:** SESE 30 110S 220E

**Permit Tech Review:** ☒

**SURFACE:** 0565 FSL 0534 FEL

**Engineering Review:** ☐

**BOTTOM:** 0565 FSL 0534 FEL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 39.82594

**LONGITUDE:** -109.48949

**UTM SURF EASTINGS:** 629270.00

**NORTHINGS:** 4409320.00

**FIELD NAME:** WILDCAT

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU-73907

**PROPOSED PRODUCING FORMATION(S):** MESA VERDE

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - UTB000173

☐ **Potash**

☐ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** 49-2296

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☐ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:**

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** R649-3-2

**Effective Date:**

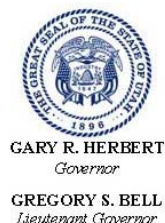
**Siting:**

☐ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:** 4 - Federal Approval - bhll  
23 - Spacing - bhll





# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** Buck Camp Unit 11-22-44-30  
**API Well Number:** 43047510190000  
**Lease Number:** UTU-73907  
**Surface Owner:** FEDERAL  
**Approval Date:** 4/22/2010

### Issued to:

Enduring Resources, LLC, 475 17th Street, Suite 1500, Denver, CO 80202

### Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-2. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

### Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

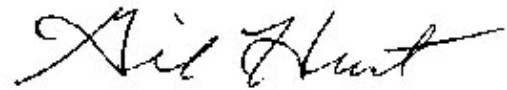
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, cursive script.

Gil Hunt  
Associate Director, Oil & Gas

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

JAN 28 2009

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010APPLICATION FOR PERMIT TO DRILL OR REENTER **BLM**

1a. Type of Work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		<b>CONFIDENTIAL</b>	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. UTU81892X	
2. Name of Operator ENDURING RESOURCES LLC		8. Lease Name and Well No. BUCK CAMP UNIT 11-22-44-30	
3a. Address 475 17TH STREET, SUITE 1500 DENVER, CO 80202		9. API Well No. 43-047-51019	
3b. Phone No. (include area code) Ph: 303-350-5114 Fx: 303-573-0461		10. Field and Pool, or Exploratory UNDESIGNATED NATURAL BUTTES	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SESE 565FSL 534FEL 39.49334 N Lat, 109.29248 W Lon At proposed prod. zone SESE 565FSL 534FEL 39.49334 N Lat, 109.29248 W Lon		11. Sec., T., R., M., or Blk. and Survey or Area Sec 30 T11S R22E Mer SLB SME: BLM	
14. Distance in miles and direction from nearest town or post office* 60 MILES SOUTH OF VERNAL, UT		12. County or Parish UINTAH	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 543'		13. State UT	
16. No. of Acres in Lease 1040.00		17. Spacing Unit dedicated to this well 40.00	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1500 +		20. BLM/BIA Bond No. on file UTB000173	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5984 KB		23. Estimated duration 20 DAYS	

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) ALVIN R. ARLIAN Ph: 303-350-5114	Date 01/28/2009
Title LANDMAN-REGULATORY		
Approved by (Signature) 	Name (Printed/Typed) James H. Sparger	Date JUL 14 2010
Title Acting Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Electronic Submission #66730 verified by the BLM Well Information System  
For ENDURING RESOURCES LLC, sent to the Vernal  
Committed to AFMSS for processing by GAIL JENKINS on 01/29/2009 (09GXJ2446AE)

RECEIVED

AUG 09 2010

NOTICE OF APPROVAL

UDOGM

CONDITIONS OF APPROVAL ATTACHED

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

09GXJ2446AE

1108-11-12-2008



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company:	Enduring Resources LLC	Location:	SESE, Sec.30, T11S R22E
Well No:	Buck Camp Unit 11-22-44-30	Lease No:	UTU-73907
API No:	43-047-51019	Agreement:	N/A

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.



**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**SITE SPECIFIC CONDITIONS OF APPROVAL**

- **Wildlife and T&E Species:**  
Lands in this lease have been identified as crucial habitat for sage grouse, pronghorn, red-tailed hawk, and habitat for other wildlife. Therefore, modifications to the Surface Use Plan of Operations will be required in order to protect this wildlife habitat from surface disturbing activities (see below).

Observe the timing restrictions given below (Only during construction & drilling).

**TIME RESTRICTIONS**

**REASONS**

March 1 – June 15.....*sage grouse lek and winter brooding habitat*

*During this period, there will be no construction, drilling, fracing, or completion operations within 2 miles of sage grouse lek in order to minimize surface disturbance during the nesting season.*

- **Transportation:**
  - All roads will be constructed to Gold Book standard
  - Limit use of roads by heavy equipment during the periods when the roads are muddy.
  - Operator will perform normal operational winter maintenance: roads will be plowed to allow safe navigation. And if snow is heavy, plows will provide breaks in the snow piled berms to allow free movement of wildlife across all roads.
- **Noxious Weeds:**
  - Power-wash all construction equipment before commencing construction activities in order to eliminate noxious weeds
- **County Class D Road – Upgrade ROW:**
  - Coordinate with Uintah County before upgrading County Class D existing road.
  - Also coordinate with the State of Utah before upgrading County Class D existing road because most of this road goes through State land.
  - If Uintah County or the State of Utah wishes to have the right-of-way (ROW) for the road, then they would need to apply for the ROW.

- Restrictions for placement of surface pipelines:-
  - a): Surface pipelines will be placed 5-10 feet outside of the borrow area.
  - b): Surface pipelines will be placed in such a way that they would not wander into the borrow area.
  - c): Pipelines will be buried at all major road and drainage crossings.
- Paint all facilities Covert Green within six months of installation, except those facilities which are required to comply with the Occupational Safety and Health Act (OSHA).
- INTERIM RECLAMATION:
  - Interim reclamation of the surface environment should take place after drilling and completion and the well is placed into production. At a minimum, this will include the stabilization of the soil surface during construction, re-contouring of the unused pad area and the reserve pit to the original contour, to the extent possible; and the re-spreading of the top soil up to the rig anchor points and any area not needed for production. Buried pipelines will be re-contoured, the salvaged topsoil redistributed and reseeded. The outside borrow of the access road will have the top soil salvaged and re-spread and reseeded. The area will be reseeded using appropriate seeding methods, which includes, but is not limited to, the drill seeding method (see below). Any adjustments, due to site specific production concerns: the reclamation COAs in this document can be submitted on Sundry form 3160-5.
  - The reclamation objective is to establish a desired self-perpetuating diverse plant community. The objective is to attain **75% basal cover** based on similar undisturbed adjacent native vegetative community, and comprised of desired species and/or seeded species within 5 years of initial reclamation action. However if after three (3) growing seasons there is less than **30%** of the basal cover based on similar undisturbed native vegetative community, then the Authorized Officer may require additional seeding efforts.
  - Topsoil will be segregated from the subsoil (without mixing them), stockpiled separately from other soil materials, and maintained for future use in rehabilitating the locations.
  - Topsoil piles stored beyond one growing season will be stabilized and seeded to prevent erosion.
  - Topsoil storage areas will be identified with appropriate signage, so it is easily identifiable where topsoil is on location.
  - Noxious and invasive weeds will be inventoried and monitored. Noxious and invasive weeds will be controlled through integrated weed management including chemical, mechanical, and biological control methods. An approved Pesticide Use Proposal (PUP) is required for all herbicide applications.
  - Earth work for interim and final reclamation must be completed within 6 months following well completion or well plugging (weather permitting).
  - Salvaged topsoil will be re-distributed evenly, and to pre-disturbance depths, over the surfaces to be re-vegetated.

- The soil surface will be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching, hydro mulching, contour furrowing, water terracing, fertilizing, disking, soil additives or other approved methods. The seedbed preparations will be determined to accomplish the reclamation objectives above.
- The seeding contractor will provide all seed tags to the appropriate SMA prior to seeding efforts.
- Seeding will occur after August 15 and prior to winter freezing of the soil.
- Drill seeding will be used except in areas where topography or substrate composition (rock) precludes the use of the drill. If drill seeding is not possible, broadcast seeding will be implemented. If the broadcast method is used (such as on slopes of 40 percent or greater), the seed rates established for drill seeding will be doubled and seed will be immediately covered to prevent seed desiccation or predation by birds or rodents. The seeds could be covered in several ways including spreading and crimping straw over the seeded area, raking the area by hand, or dragging a chain or chain-linked fence over the seeded area.
- Any altered drainages or water courses will be stabilized through rip rap, berming, seeding, matting, or other approved methods, and would be reconstructed to have the characteristics and features of nearby functional drainages. Any disturbance to "dashed line" drainages as depicted on USGS 1:24,000 topographic maps would be coordinated with the corps of engineers prior to disturbance.

#### FINAL RECLAMATION:

- Final Reclamation will be similar to interim reclamation except, all disturbance associated with the well location, access road and pipeline will be reclaimed. The seed mix may include more shrubs and native species. The visual composition will be reestablished to blend with the natural surroundings through re-contouring and reseeding.
- After pipeline installation is complete, all disturbed areas will be reseeded. The seed mixtures to be used will be similar to the vegetation of the surrounding areas and may consist of grasses, forbs, or shrubs. A recommended seed mixture is provided in the table below.

#### MONITORING – RECLAMATION:

- The initial monitoring report will include but is not limited to: when the re-contouring and seeding was completed. The seed applied, the amounts, and the depth of application. Seedbed preparation such as disking, mulching, etc. Seed application such as drilling or broadcast seeding. Are there any soil amendments, fertilizers, watering, etc. The amounts of noxious and invasive weeds. Are any fencing requirements needed?
- Prior to any surface disturbance, vegetative monitoring locations and reference sites will be identified by the operator and approved by the BLM Authorized Officer.

- Vegetation monitoring protocol will be developed by the operator and approved by the BLM Authorized Officer prior to implementation of re-vegetation techniques and will be designed to monitor % basal vegetative cover.
- Reclamation areas will be inspected annually and monitored to document location and extent of areas with successful re-vegetation. Monitoring will continue until the site is considered a success by the authorized officer and the objectives established in the Green River District Guidelines. A reclamation report will be submitted electronically to the Authorized Officer by March 31 of each year.
- On Federal lands, the reclamation objective will be a vegetation community that within 5 years is comprised of desired and/or seeded species, where the basal vegetative cover is 75 percent of a similar undisturbed adjacent native vegetation community. If after 3 years basal cover is less than 30 percent, then additional seeding and reclamation efforts may be required.

**Seed mix - Interim Reclamation:**

Common name	Latin name	lbs/acre	Recommended seed planting depth (inches)
Indian rice grass	<i>Achnatherum hymenoides</i>	3	1.5 - 3
needle & thread grass	<i>Stipa comata</i>	3	1.5 - 3
Squirreltail grass	<i>Elymus elymoids</i>	4	0.25 - 0.5
hycrest crested wheatgrass	<i>Agropyron cristayum/Agropyron desertorum hybrid</i>	4	0.5 - 0.75

**Seed mix - Final Reclamation: (May be modified at the time of well final abandonment)**

Common name	Latin name	lbs/acre	Recommended seed planting depth (inches)
black sagebrush	<i>Artemisia nova</i>	2	0.5-1
Indian rice grass	<i>Achnatherum hymenoides</i>	3	1.5 - 3
needle & thread grass	<i>Stipa comata</i>	3	1.5 - 3
shadscale	<i>Atriplex confertifolia</i>	3	0.5 - 0.75
rabbit brush	<i>Chryothamnus nauseosus</i>	3	0.5 - 1
greasewood	<i>Sarcobactus vermiculatus</i>	2	1/4 - 1/2
hycrest crested wheatgrass	<i>Agropyron cristayum/Agropyron desertorum hybrid</i>	4	0.5 - 0.75

- All pounds are pure live seed.
- All seed and mulch will be certified weed free.
- Rates are set for drill seeding; double rate if broadcasting.
- Reseeding may be required if initial seeding is not successful.



**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- If air is used as drilling fluid for the surface hole, all requirements set forth in Onshore Order #2 Section III.E. Special Drilling operations shall be adhered to unless a variance request is approved by this office.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-73907
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> Enduring Resources, LLC		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 475 17th Street, Suite 1500 , Denver, CO, 80202		<b>8. WELL NAME and NUMBER:</b> BUCK CAMP UNIT 11-22-44-30
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0565 FSL 0534 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 30 Township: 11.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047510190000
<b>9. FIELD and POOL or WILDCAT:</b> UNDESIGNATED		<b>COUNTY:</b> UTAH
<b>STATE:</b> UTAH		
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/22/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  Request an one-year extension to APD termination date.		
<div style="color: red; font-weight: bold;">             Approved by the              Utah Division of              Oil, Gas and Mining           </div> <div style="margin-top: 10px;"> <b>Date:</b> 04/18/2011           </div> <div style="margin-top: 10px;"> <b>By:</b> </div>		
<b>NAME (PLEASE PRINT)</b> Alvin Arlian		<b>PHONE NUMBER</b> 303 350-5114
<b>SIGNATURE</b> N/A		<b>TITLE</b> Landman-Regulatory
<b>DATE</b> 4/15/2011		



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047510190000

**API:** 43047510190000

**Well Name:** BUCK CAMP UNIT 11-22-44-30

**Location:** 0565 FSL 0534 FEL QTR SESE SEC 30 TWP 110S RNG 220E MER S

**Company Permit Issued to:** ENDURING RESOURCES, LLC

**Date Original Permit Issued:** 4/22/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Alvin Arlian

**Date:** 4/15/2011

**Title:** Landman-Regulatory **Representing:** ENDURING RESOURCES, LLC

**RECEIVED** Apr. 15, 2011

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-73907
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> Enduring Resources, LLC		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 511-16th Street, Suite 700 , Denver, CO, 80202		<b>8. WELL NAME and NUMBER:</b> BUCK CAMP UNIT 11-22-44-30
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0565 FSL 0534 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 30 Township: 11.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047510190000
<b>9. FIELD and POOL or WILDCAT:</b> UNDESIGNATED		<b>COUNTY:</b> UINTAH
<b>STATE:</b> UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>4/22/2012</b>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Request for an one-year extension to APD expiration date.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: May 07, 2012

By:

<b>NAME (PLEASE PRINT)</b> Alvin Arlian	<b>PHONE NUMBER</b> 303 350-5114	<b>TITLE</b> Landman-Regulatory
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/19/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Request for Permit Extension Validation Well Number 43047510190000**

**API:** 43047510190000

**Well Name:** BUCK CAMP UNIT 11-22-44-30

**Location:** 0565 FSL 0534 FEL QTR SESE SEC 30 TWP 110S RNG 220E MER S

**Company Permit Issued to:** ENDURING RESOURCES, LLC

**Date Original Permit Issued:** 4/22/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Alvin Arlian

**Date:** 4/19/2012

**Title:** Landman-Regulatory **Representing:** ENDURING RESOURCES, LLC



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS** JUN 13 2012  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU73907
2. Name of Operator ENDURING RESOURCES, LLC		6. If Indian, Allottee or Tribe Name
Contact: ALVIN (AL) R. ARLIAN E-Mail: aarljan@enduringresources.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 511-16TH STREET, SUITE 700 DENVER, CO 80202	3b. Phone No. (include area code) Ph: 303-350-5114 Fx: 303-573-0461	8. Well Name and No. BUCK CAMP UNIT 11-22-44-30
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 30 T11S R22E Mer SLB SESE 565FSL 534FEL 39.493340 N Lat, 109.292477 W Lon		9. API Well No. 43-047-51019
		10. Field and Pool, or Exploratory WILDCAT
		11. County or Parish, and State UINTAH COUNTY, UT

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original PD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Request a two-year extension of APD expiration date:

FROM: 07-14-2012  
TO: 07-14-2014

RECEIVED

SEP 10 2012

DIV. OF OIL, GAS &amp; MINING

CONDITIONS OF APPROVAL ATTACHED

VERNAL FIELD OFFICE
ENG. <i>RH</i> 8/2/12
GEOLOGIST _____
E.S. _____
PET. _____
RECL. _____

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #140488 verified by the BLM Well Information System For ENDURING RESOURCES, LLC, sent to the Vernal Committed to AFMSS for processing by ROBIN R. HANSEN on 06/29/2012 ()	
Name (Printed/Typed) ALVIN (AL) R. ARLIAN	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 06/13/2012

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <i>[Signature]</i>	Title Assistant Field Manager Lands & Mineral Resources	AUG 15 2012
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	VERNAL FIELD OFFICE	
Office		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

# **CONDITIONS OF APPROVAL**

## **Enduring Resources, LLC**

### **Notice of Intent APD Extension**

**Lease:** UTU-73907  
**Well:** Buck Camp Unit 11-22-44-30  
**Location:** SESE Sec 30 T11S R22E

An extension for the referenced APD is granted with the following conditions:

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1. The extension and APD shall expire on 07/14/2014.
2. No other extension shall be granted.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (435) 781-2777

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-73907
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> Enduring Resources, LLC		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 511-16th Street, Suite 700 , Denver, CO, 80202		<b>8. WELL NAME and NUMBER:</b> BUCK CAMP UNIT 11-22-44-30
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0565 FSL 0534 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 30 Township: 11.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047510190000
<b>9. FIELD and POOL or WILDCAT:</b> UNDESIGNATED		<b>COUNTY:</b> UINTAH
<b>STATE:</b> UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>4/22/2013</b>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Request for an one-year extension to APD expiration date.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: April 23, 2013

By:

<b>NAME (PLEASE PRINT)</b> Alvin Arlian	<b>PHONE NUMBER</b> 303 350-5114	<b>TITLE</b> Landman-Regulatory
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/22/2013	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Request for Permit Extension Validation Well Number 43047510190000**

**API:** 43047510190000

**Well Name:** BUCK CAMP UNIT 11-22-44-30

**Location:** 0565 FSL 0534 FEL QTR SESE SEC 30 TWP 110S RNG 220E MER S

**Company Permit Issued to:** ENDURING RESOURCES, LLC

**Date Original Permit Issued:** 4/22/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Alvin Arlian

**Date:** 4/22/2013

**Title:** Landman-Regulatory **Representing:** ENDURING RESOURCES, LLC





GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

May 22, 2014

Al Arlian  
Enduring Resources, LLC  
511-16th Street, Suite 700  
Denver, CO 80202

Re: APD Rescinded – Buck Camp Unit 11-22-44-30, Sec. 30 T. 11S, R. 22E  
Uintah County, Utah API No. 43-047-51019

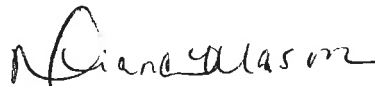
Dear Mr. Arlian:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on April 22, 2010. On April 18, 2011, May 7, 2012 and April 23, 2013 the Division granted a one-year APD extension. On May 22, 2014, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective May 22, 2014.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

